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EMERGENCY MEDICAL SERVICES ADMINISTRATION

NATIONAL FIRE ACADEMY • NATIONAL EMERGENCY TRAINING CENTER

STUDENT MANUAL

Louis O. Giuffrida, Director

EMERGENCY MEDICAL SERVICES ADMINISTRATION

NATIONAL FIRE ACADEMY • NATIONAL EMERGENCY TRAINING CENTER

FEDERAL EMERGENCY MANAGEMENT AGENCY

NATIONAL EMERGENCY TRAINING CENTER

NATIONAL FIRE ACADEMY

FOREWORD

The Federal Emergency Management Agency (FEMA) was established in 1979 and is now directed by The Honorable Louis O. Giuffrida. FEMA's mission is to focus federal effort on preparedness, mitigation, response and recovery of emergencies encompassing the full range of natural and man-made disasters.

FEMA's National Emergency Training Center in Emmitsburg, Maryland, includes the National Fire Academy, the United States Fire Administration, and the Emergency Management Institute. This center is directed by The Honorable Clyde A. Bragdon, Jr., Acting Associate Director, Training and Fire Programs.

To achieve the Academy's legislated mandate (under Public Law 93-493, October 29, 1974) "to advance the professional development of fire service personnel and of other persons engaged in fire prevention activities," the Field Programs Division has developed an effective program linkage with established fire training systems which exist at the state and local level. It is the responsibility of this division to support and strengthen these delivery systems. Academy field courses have been sponsored by the respective state fire training systems in every state.

The material for the Emergency Medical Services Administration course has been developed from portions of the two-week Academy Residential course titled "Management of EMS for the Fire Service" and from additional sources in the emergency medical services profession.

Emergency Medical Services Administration seeks to provide the student with an overview of the skills needed, the issues involved, and the challenges surrounding the design and management of an emergency medical services organizational unit.

The staff of the Training and Fire Programs Directorate is proud to join with state and local fire agencies in providing educational opportunities to the members of the nation's fire services.

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ACKNOWLEDGEMENTS

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THE INCIDENT COMMAND SYSTEM (ICS)

Although many systems exist throughout the nation for the command and control of resources at emergency incidents, the National Fire Academy has adopted the Incident Command System (ICS) as its base for teaching the concepts of incident command.

ICS is recognized by the Academy as a system that is documented and has been successfully used in managing available resources at emergency operations. All procedures will not perfectly fit all departments nor will the system necessarily need to be fully implemented for all situations the fire service will encounter.

The Incident Command System was developed as a consequence of fires that consumed large portions of wildland including structures in Southern California in 1970. As a result of those fires, a need was identified to develop a system whereby different agencies could work together toward a common goal in an effective and efficient manner. The material contained in this manual was developed by a multi-agency task force. The California Department of Forestry, through the United States Forest Service and the Federal Emergency Management Agency, developed the materials in cooperation with the California State Fire Marshal's Office, the California Office of Emergency Services and the FIRESCOPE task force.

The system consists of procedures for controlling personnel, facilities, equipment, and communications.

It is designed to begin developing from the time an incident occurs until the requirement for management and operations no longer exists. The "Incident Commander" is a title which can apply equally to an engine company captain or to the chief of a department depending upon the situation. The structure of the Incident Command System can be established and expanded depending upon the changing conditions of the incident. It is intended to be staffed and operated by qualified personnel from any emergency services agency and may involve personnel from a variety of agencies.

As such, the system can be utilized for any type or size of emergency, ranging from a minor incident involving a single unit, to a major emergency involving several agencies. The Incident Command System allows agencies to communicate using common terminology and operating procedures. It also allows for the timely combining of resources during an emergency.

ICS is designed to be used in response to emergencies caused by fires, floods, earthquakes, hurricanes, tornados, tidal waves, riots, hazardous materials, or other natural or human-caused incidents.

Operating Requirements

The design requirements for the Incident Command System are the following:

- Can provide for the following kinds of operations: (a) single jurisdiction/single agency involvement, (b) single jurisdiction with multi-agency involvement, (c) multi-jurisdiction/ multiagency involvement.
- Organizational structure can adapt to any emergency or incident to which fire protection agencies would be expected to respond.
- Can be applicable and acceptable to users throughout the country.
- Should be readily adaptable to new technology.
- Must be able to expand in a logical manner from an initial attack situation.
- Must have basic common elements in organization, terminology, and procedures. This allows for the maximum application and use of already developed qualifications and standards, and ensures continuation of a total mobility concept.
- Implementation should have the least possible disruption to existing systems.
- Must be effective in fulfilling all of the above requirements and yet be simple enough to insure low operational maintenance costs.

Components of the ICS

The Incident Command System has a number of components. These components working together interactively provide the basis for an effective ICS concept of operation:

- Common terminology
- Modular organization
- Integrated communications

- Unified command structure
- Consolidated action plans
- Manageable span-of-control
- Predesignated incident facilities
- Comprehensive resource management

Organization and Operations

The ICS has five major functional areas:

- Command
- Operations
- Planning
- Logistics
- Finance

THE INTEGRATED EMERGENCY MANAGEMENT SYSTEM

The Integrated Emergency Management System (IEMS) is a long-term, all-hazard concept for improving the program implementation and development of emergency management capabilities at the state and local levels. It is a process for applying comprehensive emergency management concepts to "real world" emergency plans and capabilities. It formally recognizes the roles of the fire service in responding to the full range of emergencies at the local level.

Its specific objectives are to:

1. Save lives and protect property threatened by hazards.
2. Reduce duplication of efforts and resources.
3. Increase jurisdictional flexibility in upgrading the capacity to handle potential hazards.
4. Integrate FEMA support and objectives with those state and local operational requirements.

Viewed in this manner, it becomes clear that existing fire service programs such as the Incident Command System (ICS) are part of the broader concept of IEMS. ICS-IEMS identifies the need for "baseline" fireground command systems to provide for a predictable, coordinated, effective and acceptable response to emergencies of all types by the fire services of this country.

The IEMS approach recognizes that there are certain characterisitics and requirements which are common across the full spectrum of emergencies--evacuation, sheltering, provision of food and medical supplies, etc. Each of the aforementioned functions requires an operational procedure. ICS is such a procedure to ensure all areas of concern are addressed. FEMA's programs are using the IEMS approach to assist state and local officials in building capability in these areas as a basic foundation for planning, response, recovery, and mitigation of hazards-whether they are related to natural or technological disasters, resource shortages, or war-related national security situations.

IEMS is being introduced to a nationwide network of emergency management organizations representing thousands of jurisdictions, not all confronted by the same hazards, and not all having or requiring the same capabilities. Going through the IEMS process, therefore, will require different levels of effort by each jurisdiction and will result in the identification of different functional areas requiring attention. The process, however, is logical and applicable to all jurisdictions regardless of their size, level of sophistication, potential hazards, or current capabilities.

The goal of the system is to develop and maintain a credible emergency management capability nationwide by integrating activities along functional lines at all levels of government, and, to the fullest extent possible, across all hazards. It should be kept in mind that the IEMS process is a means of improving capability and is not an end in itself. The various steps in the IEMS process are intended to serve management at each level of government by providing basic information upon which reasonable and justifiable plans can be made and effective action taken to increase emergency management capability nationwide.

COURSE SCHEDULE

DAY 1

Unit	Title
I	Management Theory
II	Systems Design
III	Resources
IV	EMS Councils
V	Problem Solving
VI	Training (optional)

DAY 2

VII	Supervision
VIII	Legal Concepts
IX	Financial Management

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COMMENT SHEET

Emergency Medical Services Administration

DATE _____ NAME _____

ADDRESS _____

ORGANIZATION REPRESENTED _____

Use this sheet to make any suggestions, recommendations, or comments. Your help is appreciated. Use additional pages, if necessary.

RETURN TO: Training Materials Development
National Fire Academy
National Emergency Training Center
Federal Emergency Management Agency
16825 S. Seton Ave.
Emmitsburg, MD 21727

UNIT I
MANAGEMENT THEORY

UNIT I

MANAGEMENT THEORY

In this unit, you will be offered a basic understanding of the skills required for good management, what management means, and what the process of management involves.

At the end of the unit, you should be able to:

1. Define and give examples of technical, human, and conceptual skills.
2. Cite one or more general definitions of management.
3. Use the five steps involved in the management process to analyze a management problem.

In this unit, we will do the following:

1. Do an activity identifying manager attributes.
2. Discuss skills required for good management.
3. Do an activity defining management and discuss the definition of management.
4. Receive a lecture on management as a process.

NOTE TAKING GUIDE

NOTETAKING OUTLINE - KATZ CATEGORIES OF SKILLS

A. Technical

B. Human

C. Conceptual

NOTETAKING OUTLINE - MANAGEMENT AS PROCESS

1. Planning

2. Organizing

3. Implementing

4. Administrating

5. Evaluating

MANAGEMENT BY OBJECTIVES

1. Develop goals and objectives

2. Accomplish goals and objectives

3. Conduct on-going evaluation

STUDENT ACTIVITIES

ACTIVITY ONE - IDENTIFYING MANAGER ATTRIBUTES

Think of a good manager you worked under, preferably an EMS manager, and list some of that person's skills:

A.

B.

C.

D.

E.

ACTIVITY TWO - DEFINING MANAGEMENT

1. Write your own definition of management.

2. Note other aspects of management suggested in the class discussion that you think are important.

TEXT

1. Management Skills - In 1955, Robert Katz listed three broad categories of management skills:

   a. The Human skills involve coordination, commmunication, and motivation of employees. Examples of human skills include working as a group member or leader and maintaining or fostering intergroup relationships.

   b. The Conceptual skills involve formulating goals, structuring an organization, devising strategies, etc. Examples of conceptual skills include the recognition of interrelationships, and the ability to see the "big picture."

   c. The Technical skills involve operational activities such as providing patient care, using equipment (radios, monitor/defibrillators,) etc. Katz believes that as you rise higher in an organization, you spend less time using technical skills (for example being a street-level EMT) and more time and importance is placed on your human and conceptual skills.

2. EMS Manager Background - It bears repeating that, by and large, EMS Managers are selected for their jobs because of their EMT abilities--in other words their technical expertise as EMTs. As a result, there is a real need for development of their conceptual and human skills versus their operational abilities.

3. Management Definition - A great deal of discussion revolves around what is an acceptable definition of management. For example, views of management range from the ridiculous to the sublime:

   a. Hellers' Myths of Management: "The first myth of management is that it exists. The second myth of management is that success equals skill."

   b. Peter F. Drucker: "Management is professional. . .a function, a discipline, a task to be done; and managers are the professionals who practice this discipline, carry out the functions, and discharge the tasks."

   c. George Wren: "Management is both an art and a science. It is an art based on a scientific foundation."

   d. Lawrence Appley: "[Management is] guiding human and physical resources into dynamic organizational units which attain their objectives, to the satisfaction of those served and with a high degree of morale and sense of attainment on the part of those rendering service."

e. Beaufort B. Longest, Jr.: "Management is a process, with both interpersonal and technical aspects, through which the objectives of the health services organization are specified and accomplished by utilizing human and physical resources and technology."

f. Claude S. George, Jr: "Management is the process of setting and achieving objectives by influencing human behavior within a suitable environment."

Although the exact definition of management is a bit nebulous, there is agreement that management involves task completion. A working definition of management could be a shortened version of Lawrence Appley's:

". . .getting things done through other people."

or former President Dwight Eisenhower's equally succinct definition of leadership:

". . .getting people to do things you want done in the way you want them done, because they want to do it."

4. The Management Process - There is also general agreement that management is a process involving certain categories of functions. As early as 1916, Henri Fayol emphasized that management dealt with planning, organizing, commanding, coordinating, and controlling. By permutating these slightly, we arrive at the five-step management process:

   a. Planning, which involves determining goals, objectives, and potential resources/constraints.

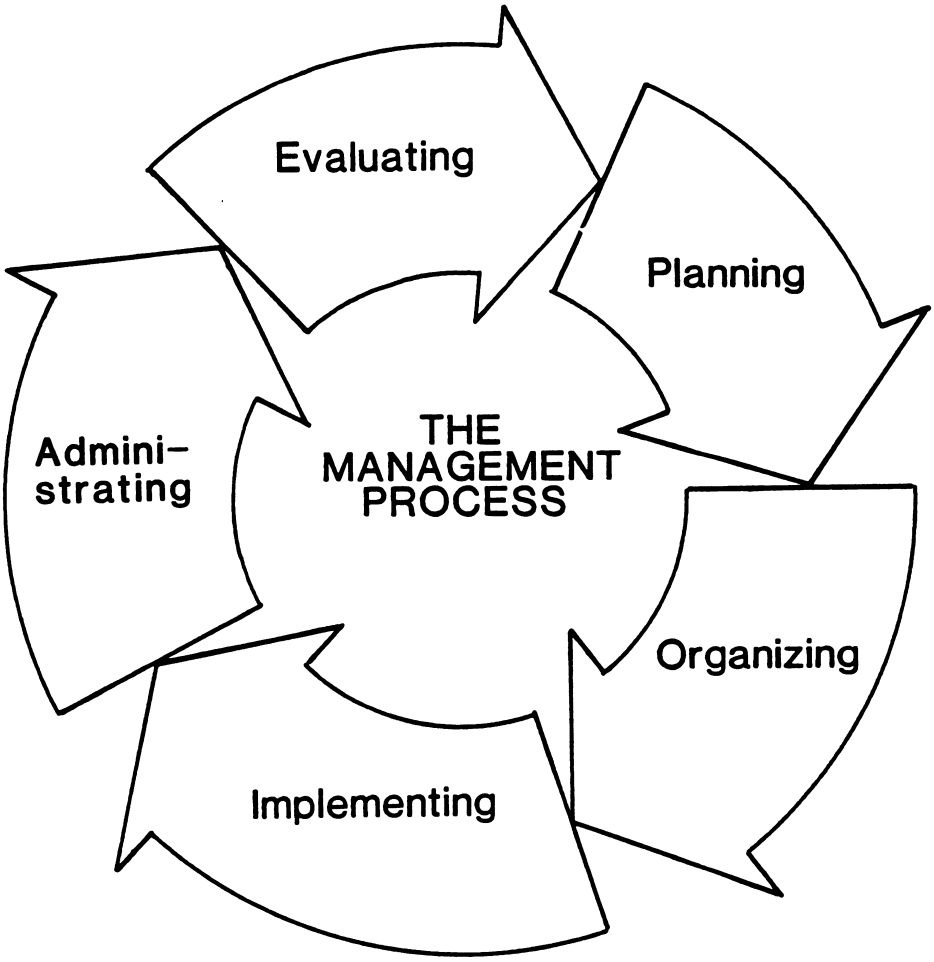
   b. Organizing, which involves arranging people, things, and equipment so that the plans can be accomplished.

   c. Implementing, which involves actions that must be taken to initiate the plans.

   d. Administration, which involves ongoing coordination of activities.

   e. Evaluation, which involves the techniques used to measure success (or failure) against a standard. These techniques also include a "feed-back loop" so that plans can be modified based on experience.

The five-step process is cyclical--each step leads to the next. A more accurate way to portray this is:



On occasion each of these steps may also be performed simultaneously with other steps.

Often used by departments as part of the management process is "Management by Objectives (MBO)." It is essentially composed of three steps. First, goals and objectives must be developed for the department. Second, departmental members must participate in the accomplishment of these goals and objectives. And third, an ongoing process of review and evaluation must be initiated.

A key component of MBO is the commitment of both management and departmental members to make the MBO process work. As a result, MBO is often used in conjunction with "consensus management" techniques such as "quality circles." These are small groups of personnel who do similar kinds of work, meet regularly, and attempt to identify problems and suggest solutions. Another way to gain both personnel input and improve motivation is via a "Theory Z" supervisory style, which is briefly discussed in the Supervision and Medical Control unit.

MANAGING THE VOLUNTEER A PERSONNEL MANAGEMENT GUIDE

by Colin A. Campbell, Editor

This article is a condensation of "Personnel Management for Volunteer Fire Deparments," a publication of the International Association of Fire Chiefs Foundation. The pul.lication is part of the Fire Officer Management Series prepared under the supervision of the Foundation's Executive Director, Chief David B. Gratz.

Since 1736, when Benjamin Franklin organized the nation's first volunteer fire department in Philadelphia, through the tumultuous years of the mid 1800s, when a disorganized, disorderly and brawling volunteer fire service led to the creation of the country's first paid fire departments in Cincinnati and Boston, the volunteer fire service has survived and flourished despite formidable obstacles. Volunteer fire departments have survived because they were, and still are, born of necessity.

People always have been a critical factor in the operations of volunteer fire departments. Every fire chief recognizes that, in the final analysis, fire stations, apparatus and equipment are of little value unless the necessary quantity and quality of personnel are available to make them function.

The need for improved personnel management is particularly acute today because of the increasing complexities brought about by a number of evolutionary, even revolutionary, changes that are taking place in the field of personnel management.

For the purposes of this article, the term volunteer will be defined in the broad sense. A volunteer fire fighter will be defined as an individual who does not obtain his or her primary livelihood from being a fire fighter.

In order to understand better the magnitude of the personnel function, it would be well to review the functions of personnel management. Simply stated, personnel management involves the broad variety of activities required to establish and maintain a highly motivated and smoothly performing force of personnel.

The scope of activities required to achieve this objective in the fire service is broad and varied. Included are:

- qualifications and standards for membership;
- recruitment;
- applicant evaluation programs;
- orientation;
- training;
- performance standards and evaluation programs;
- motivation, discipline and rhorale;
- recordkeeping; and
- benefit programs for volunteers.

It should be emphasized that these are only broad subject headings. For the purpose of introduc-

Future personnel problems can be reduced by selecting only those individuals who have the interest and ability to perform the job of a volunteer fire fighter.

tion, suffice it to say that these functions encompass every facet of the relationship with the volunteer fire service's most important resource . . . people.

Membership Committee

A volunteer fire department relies heavily on committees to carry out a great deal of the organization's business. One of the most important of these commmittees is that which is concerned with recruitment, evaluation and processing of applications, recommending new members and related activities associated with personnel. In most departments, this committee is titled the Membership Committee.

Generally the membership committee is appointed by the president and includes a cross section of new and experienced members of the department. The members appointed to the committee should have a thorough understanding of the objectives of the department and the mission of the volunteer fire service.

The membership committee should consist of at least three persons. Some departments think five is a more desirable committee because it allows the committee to be more representative of the department's membership.

Qualifications and Standards for Membership

It is accurate to say that many personnel problems are the result of having selected the wrong individual to begin with. Future personnel problems can be reduced by selecting only those individuals who have the interest and ability to perform the job of a volunteer fire fighter. Therefore, a little extra time and effort in the selection process are good investments.

A better selection process does not have to be a burden. All that is required is that there be available a set of standards and a systematic procedure to follow. General qualifications, entry standards, testing and minimum requirements for membership should be a part of that process. With those tools, the screening process can be carried out with a minimum of work.

Applicant Evaluation and Appointment

As a general rule, volunteer departments tend to be informal in their procedures for soliciting members. In many communities, acceptance of new members might even be based on the individual's social acceptance, rather than on his or her interest or ability to perform as a fire fighter. Certainly there is nothing wrong with including honorary, business, emergency medical service or similar categories of membership.

During the screening process, a fire department might want to give recognition to the importance of fire prevention and other activities. A department might want to establish social categories for certain members who, because of age or physical problems, might be limited to participation in fire prevention or support activities. However, a department should draw a distinction between those members who actually will be involved in performing emergency services and those members in special categories.

Personnel Management for Volunteer Fire Departments deals only with the selection procedures for persons to perform the emergency services. It covers application forms, applicant interviews and additional evaluation.

Orientation and Probationary Period

Once an applicant has been approved for membership in a volunteer fire department and before the applicant begins responding to emergency calls or begins a training program, he or she should be familiarized thoroughly with the department's structure and procedures. This orientation phase is particularly important from the standpoint of personal safety and no new member should be allowed to participate in any emergency operation without first being indoctrinated in safety procedures.

Most departments require that new members serve a probationary period before being accepted as full members. The length of that probation can vary from thirty days to two years, with 12 months being the most common. The purpose of the probationary period is to provide the department an opportunity to evaluate the interest, compatibility and ability of new members. Completion of specific levels of training and activity should be required during the probationary period.

Training

The training of volunteer fire fighters and the department's review of the member's skills and progress should not cease with the end of the orientation and probationary periods. Continuing education and training are a necessity and should be a top departmental priority.

A department's training program should be planned, designed and implemented to give its fire fighters the skills they need to handle successfully the many and varied emergency incidents to which they respond. Successful completion of

If a volunteer fire department is going to take a second look at its personnel management programs, the first step should be a review of its recordkeeping system.

different phases of a sequential training program should be necessary to gain promotion within the department. Attendance at an adequate number of training sessions should be part of the department's rules and regulations, and failure to comply should be grounds for dismissal.

Discipline, Motivation and Morale

Discipline is essential to a safe and efficient fire service. How do you discipline people who are volunteering their time to serve their community? No matter how difficult the problem is, it must be dealt with. Orders must be obeyed and discipline must be maintained. Discipline begins with training. The leaders who train their personnel well will have few problems. Disciplined units are recognized easily. They get results. Hose is stretched, ladders are raised and rescues are made. The work is done smoothly and with dispatch. Disciplined fire fighters overcome obstacles. The undisciplined seek every excuse not to do the job.

Discipline is not achieved easily because there always will be some who will not conform to the rules. Officers must require all personnel to obey established regulations. Officers also must set an example by compliance with regulations. Failure to insist that all fire fighters adhere to the rules leads to the cry of partialty or inconsistency, with its resultant disciplinary problems.

Recordkeeping

Any personnel system will require quality and thoroughness of records. If a volunteer fire department is going to take a second look at its personnel management programs, the first step should be a review of the forms and paperwork that comprise its membership records.

The problem with most volunteer fire department records is their inconsistency. In other words, the quality of the records is related directly to the quality of the department's leadership. If the leadership is lax, then that results in a quality gap in the department's membership records.

The solution is a records system simple enough to be maintained completely and easily, yet complete enough to facilitate adequate evaluation of the work and worth of the members.

Benefit Programs for Volunteers

The compensation of volunteer fire fighters sounds almost like a contradiction in terms. If persons are volunteering their services, then why should there be any compensation? The problem is that we live in an ever-changing and fast-paced society where everyone's time has become more valuable, and the volunteer fire service must try to keep pace with the changing times.

With increasing inflation and the added income needed to support a family, it has become increasingly difficult for people simply to give away their time. Perhaps, in order to keep some fire fighters from trading their department memberships for second jobs and to avoid an even greater manpower squeeze, volunteer fire departments might have to consider some form of compensation for their members. *Personnel Management for Volunteer Fire Departments* discusses benefit programs, including compensation schedules, service pensions, service documentation and federal benefits.

Personnel Management for Volunteer Fire Departments is a 15-page 8½x11 publication. It covers, with more depth, all the subjects mentioned in this article and includes a sample application form, recruitment flyer and awards program. The publication's cost is $2.50 for IAFC members and $5.00 for nonmembers. It is available from the *International Association of Fire Chiefs Foundation, 1329 18th Street, N.W., Washington, D.C. 20036.*

The Fire Chief's Role in Personnel Management

Fire chiefs are under increasing pressures which tend to dilute their effectiveness as personnel managers. While it might be natural for chiefs to resent those pressures, it would not be natural for fire chiefs to shirk their prime responsibility which sometimes is obscured by those pressures. That prime responsibility is the maintenance of a "high level" of personnel.

The question that confronts fire chiefs then is whether they can continue to function despite the many pressures and influences that bear on their ability to achieve and maintain a harmonious and effective volunteer fire fighting force which, after all, is the objective of personnel management in the volunteer fire service. The answer to that question is yes, if fire chiefs are willing to take some necessary steps which are outlined in *Personnel Management for Volunteer Fire Departments.*

UNIT II
SYSTEMS DESIGN

UNIT II

SYSTEMS DESIGN

In this unit, you will be introduced to a broad definition of EMS, and to methodology and considerations important in planning an effective EMS System.

At the end of the unit, you should be able to:

1. Recognize the role of groups other than your own in providing Emergency Medical Services.
2. Know the 15 components of an EMS system.
3. Describe the features of your specific community affecting EMS planning.
4. Formulate goals for your own EMS system.

In this unit, we will do the following:

1. Discuss the definition of EMS.
2. Learn about 15 components of a well-planned EMS System.
3. Make a community features analysis.
4. Discuss the implications of these features.
5. Learn about forming goals and objectives.
6. Practice goals formation.

NOTE TAKING GUIDE

NOTETAKING OUTLINE

A. EMS Definition

B. EMS Systems Components

1. Manpower

2. Training

3. Communications

4. Transportation

5. Facilities

6. Critical Care Units

7. Public Safety Agencies

8. Consumer Participation

9. Access to Care

10. Transfer of Patients

11. Medical Record-keeping

12. Consumer Information and Education

13. Review and Evaluation

14. Disaster Linkage

15. Mutual Aid

C. Goals and Objectives

1. Goals are usually the departmental mission or similar broad targets.

2. Objectives include:

STUDENT ACTIVITIES

ACTIVITY THREE

The following exercise is taken from the National Fire Academy's Course, "Management of EMS for the Fire Service," as developed by Dunlap and Associates.

Listed below are eight categories of community features. The list should not be considered complete for all communities. Analyze your community by listing briefly the type of features found there. Each space does not necessarily have to be completed if the feature does not apply to your community.

Community features

1. Physical characteristics

   terrain _____

   water _____

   mountains _____

   special hazards _____

   transport facilities _____

2. Demographics

   population size _____

   densities _____

   age distribution _____

   growth rates _____

   land-use characteristics _____

   rural-urban patterns _____

3. Medical needs/demands

ambulance demand_____

heart attacks_____

motor vehicle accidents_____

4. Prehospital providers

first responders_____

volunteer services_____

basic life support (EMT) personnel_____

_____

paramedic-trained (or ALS-trained) personnel_____

_____

5. Hospital services

24-hour facilities_____

full-time emergency departments_____

trauma center_____

burn facilities_____

blood/X-ray/pharmacy_____

ancillary services_____

6. Emergency communications

radio-telemetry capabilities_____

centralized dispatch systems_____

police/fire communication systems_____

mutual aid system_____

disaster communications_____

interhospital communication system_____

7. Political/organizational

EMS Council_____

medical/professional societies_____

EMS budget approval_____

disaster planning committees_____

8. Special features

community colleges_____

medical/health education programs_____

mental health facilities_____

neighborhood health clinics_____

rehabilitation centers_____

ACTIVITY FOUR

Listed below are eight descriptive categories. Using the space provided under each category, briefly describe:

A. Your city's/region's present EMS System
B. Your city's/region's long-range (5 year) EMS goals

1. Level of service (BLS, ALS, intermediate levels)

Present: _____

_____

_____

Goals: _____

_____

_____

2. Criterion Level of Service (average response times, number of trained EMS personnel, number of ambulances, number of EMS-equipped pumpers, etc.)

Present: _____

_____

_____

Goals: _____

_____

_____

3. Types of Service (extrication, first responder, transportation, routine transfers, air, sea, search and rescue, etc.)

Present: _____

_____

_____

Goals: _____

_____

_____

4. Political acceptability (support from community groups, public officials, state/region EMS organizations, etc. Opposition from other EMS providers, poor community image, etc.)

Present:_____

_____

_____

Goals:_____

_____

_____

5. Access (population and service area (constituency) and method of accessing system, i.e. 911)

Present_____

_____

_____

Goals:_____

_____

_____

6. Organizational forms of service (dual role, separate EMS division, independent, public or private, tax or fee, etc.)

Present: _____

_____

_____

Goals: _____

_____

_____

7. System Management (regulation or control, public safety commission, designated monitoring organizations, local ordinances, regional directives, state statutes, etc.)

Present: _____

_____

_____

Goals: _____

_____

_____

8. Externally established goals (Standard 11 of Highway Safety Act of 1966; EMS Act of 1973; state/regional EMS plans, etc.)

Present: _____

_____

_____

Goals: _____

_____

_____

TEXT

EMS SYSTEM DESIGN

BACKGROUND READING FOR THE STUDENT

A. EMS DEFINITION: Emergency Medical Services consists of facilities, personnel, and equipment for the provision of emergency medical care.

B. EMS SYSTEM COMPONENTS: The student's attention is directed to the article, "Emergency Medical Services System Development: A National Initiative," authored by Dr. David Boyd. Note that the article refers to the 15 components of an EMS program. The 15 components as they are listed in Public Law 93-154, Emergency Medical Services Systems Act of 1973, are that an EMS System shall:

1. (PROVISION OF MANPOWER)"...include an adequate number of health professionals, allied health professionals, and other health personnel with appropriate training and experience."

2. (TRAINING OF PERSONNEL) "...provide for its personnel appropriate training (including clinical training) and continuing education programs which (I) are coordinated with other programs in the systems's service area which provide similar training and education, and (II) emphasize recruitment and necessary training of veterans of the Armed Forces with military training and experience in health care fields and of appropriate public safety personnel...."

3. (COMMUNICATIONS)"...join the personnel, facilities, and equipment of the system by a central communications system so that requests for emergency health care services will be handled by a communications facility which (I) utilizes emergency medical telephonic screening (II) utilizes...the universal emergency telephone number 911 and, (III) will have direct communication connections-with the personnel, facilities and equipment of the system...."

4. (TRANSPORTATION)"...include an adequate number of necessary ground, air and water vehicles, and other transportation facilities to meet the individual characteristics of the system's service area--(I) which vehicles and facilities meet appropriate standards relating to location, design, performance and equipment, and (II) the operators and other personnel...meet appropriate training and experience requirements...."

5. (FACILITIES)"...include an adequate number of easily accessible Emergency Medical Services facilities which are collectively capable of providing services on a continuous basis...have appropriate nonduplicative and categorized capabilities...meet appropriate standards relating to capacity, location, personnel, and equipment, and which are coordinated with other health care facilities of the system."

6. (CRITICAL CARE UNITS)"...provide access (including appropriate transportation) to specialized critical medical care units in the system's service area, or, if there are no such units...provide access to such units in neighboring areas if access to such units is feasible in terms of time and distance."

7. (USE OF PUBLIC SAFETY AGENCIES)"...provide for the effective utilization of the appropriate personnel, facilities, and equipment of each public safety agency providing emergency services in the system's service area."

8. (CONSUMER PARTICIPATION)"...be organized in a manner that provides persons who reside in the system's service area and who have no professional training or financial interest in the provision of health care with an adequate opportunity to participate in the making of policy for the system."

9. (ACCESSIBILITY TO CARE)"...provide, without prior inquiry as to ability to pay, necessary emergency medical services to all patients requiring such services."

10. (TRANSFER OF PATIENTS)"...provide for transfer of patients to facilities and programs which offer such followup care and rehabilitation as is necessary to effect the maximum recovery of the patient."

11. (STANDARD MEDICAL RECORDKEEPING)"...provide for a standardized patient recordkeeping system...records shall cover the treatment of the patient from initial entry into the system through his discharge from it, and shall be consistent with ensuing patient records used in follow up care and rehabilitation of the patient."

12. (CONSUMER INFORMATION AND EDUCATION)"...provide programs of public education and information in the system's service area...programs stress the general dissemination of information regarding appropriate methods of medical self-help and first aid and regarding the availability of first aid training programs...."

13. (INDEPENDENT REVIEW AND EVALUATION) "...provide for (I) periodic, comprehensive, and independent review and evaluation of the extent and quality of the emergency health care services provided in the system's service area, and (II) submission to the Secretary (D.H.H.S.) of the reports of each such review and evaluation."

14. (DISASTER LINKAGE)"...have a plan to assure that the system will be capable of providing emergency medical services...during mass casualties, natural disasters, or national emergencies."

15. (MUTUAL AID AGREEMENTS)"...provide for the establishment of appropriate arrangements with emergency medical services systems...serving neighboring areas for the provision of emergency medical services on a reciprocal basis...."

C. COMMUNITY FEATURES: Unique aspects of each student's community impact on their EMS system. The following eight community features have been identified as having particular pertinence to EMS system design:

1. PHYSICAL CHARACTERISTICS - This feature includes specific aspects of a community's topography to include rivers, mountains, and other terrain landmarks.

2. DEMOGRAPHICS - This feature includes unique characteristics of a community's population such as specific groupings of people with special needs: minority groups who only speak a foreign language, elderly care centers with a need for cardiac emergency assistance, etc. This feature also includes population densities with associated seasonal variations.

3. MEDICAL NEEDS/DEMANDS - This feature includes the total ambulance call volume for all prehospital EMS providers. In addition it may include incident data by category: cardiac "runs," trauma, burns, etc.

4. PREHOSPITAL PROVIDERS - This feature includes all personnel who provide prehospital emergency medical care: fire service/EMS providers, citizens who provide CPR or first aid, volunteer and career EMS agencies, Third Services, public safety (police/sheriff) departments, proprietary ambulance services, etc.

5. HOSPITAL SERVICES - This feature is concerned with emergency department capabilities as well as the capabilities of other hospital departments: Intensive Care Units, Critical Care Units, operating facilities, burn units, etc.

6. EMERGENCY COMMUNICATIONS - This feature includes EMS dispatch, fire/rescue and police communications systems, 911, telemetry, disaster communications capabilites such as reserve electrical generators, radiotelephones, HAM radio systems, etc.

7. POLITICAL/ORGANIZATIONAL - This feature includes those local and regional agencies involved in EMS. For example: EMS Councils, disaster planning subcommittees, jurisdictional resource management groups, budgeting and review committees, etc.

8. SPECIAL FEATURES - This includes any features not previously covered which impact on a community's EMS system. Examples include community colleges (possible training sites) and mental health facilities (both for transport of psychiatric emergencies and for training of EMS personnel).

D. EMS GOALS: It should be noted that an EMS System's goals should logically result from an analysis of the community's needs (or features).

1. DEFINITION OF A GOAL: Every organization has a goal; but few organizations have clearly stated, written goals. A goal, in broad terms, is simply the end result your organization is trying to attain.

2. DEFINITION/COMPONENTS OF OBJECTIVES: Objectives are the interim steps that lead to your goal. Good objectives should be:

   a. Achievable
   b. Written out
   c. Specific as to time, cost, quality, and quantity
   d. Reasonable (especially the time frame)
   e. Include the end result desired
   f. Important to the success of the organization's goals
   g. Mutually agreed upon
   h. Tracked (periodically reviewed)
   i. Politically astute
   j. With written supporting tasks

   Often objectives are divided into short-range (1 year) and long-range (3 to 5 years) and used in conjunction with "Management of Objectives" (discussed in the Management Theory unit).

3. EIGHT EMS DESCRIPTIVE CRITERIA: The following eight criteria are useful in planning EMS Goals:

   a. LEVEL OF SERVICE - first aid, Basic Life Support (EMT), Advanced Life Support, etc.

   b. CRITERION LEVEL OF SERVICE - numbers of trained/certified EMS personnel, ambulances, etc.

   c. TYPES OF SERVICE - search, routine, and emergency transports, stand-bys, etc.

   d. POLITICAL ACCEPTABILITY - support or opposition from community groups, elected officials, etc.

   e. ACCESS, AND METHOD OF ACCESSING SYSTEM - constituency, call boxes, CB radio/NEARS, 911, etc.

   f. ORGANIZATIONAL FORMS OF SERVICE - EMS provided by: Third service, proprietary agency, volunteer service, etc.

   g. SYSTEM MANAGEMENT - local ordinances, codes, regulations, corporate bylaws, etc.

   h. EXTERNALLY ESTABLISHED GOALS - State or regional plans, Emergency Medical Services Systems Act of 1973.

E. COMMUNITY RISK ASSESSMENT: Once an EMS manager has an understanding of the community features and of the EMS descriptive criteria, an EMS community risk assessment can be completed. Of special importance to this task are the community features since they often provide site-specific hazard information. The key points to cover in the assessment deal with the determination of hazard analysis:

   1. PREDICTABILITY of a possible disaster is based on the logical affirmation of a forecast determined by observation, experience, scientific reason, and/or historical evidence from previous disasters.

   2. FREQUENCY of disaster is based on past experience, historical events, and prediction (or forecasting) of possible future events. Disaster frequency can be divided into four categories: frequent, infrequent, rare, and extraordinary.

3. CONTROLLABILITY of a disaster is generally limited to the power a jurisdiction has to guide or manage the direction or coordination of activities through mitigation and preparedness measures prior to the incident; and response and recovery measures taken after the incident.

4. DURATION of a disaster may include increased readiness, warning, evacuation, recovery, and long-term residual effects of the incident.

5. SCOPE of a disaster may be wide or quite narrow depending on the time of day, the season of the year, and other factors.

6. INTENSITY of impact may be limited or severe; involving only your jurisdiction or several.

Using these six factors in conjunction with the community features, it is possible to realistically plan for any potential disaster. For example, a hazard assessment for specific types of hazardous materials will include current locations of these substances, an analysis of previous incidents involving them, a survey of available resources, etc. With this information in hand you can then make a probability projection of the chances of an incident occurring, as well as estimate potential risk to the community and rescuers. Further information about hazardous materials is available from the National Fire Academy's courses: "Planning for a Hazardous Materials Incident" (Resident) and "Hazardous Materials Incident Analysis" (Field).

The EMS Manager's job includes integrating the EMS system's 15 components, the special features of his/her own community, the key points in hazard analysis, and the aforementioned EMS descriptive criteria into the system's short- and long-range plans.

F. INTEGRATED EMERGENCY MANAGEMENT SYSTEM: Part of the EMS manager's function is also to recognize existing emergency management concepts and programs that can be useful to departmental operations. The Integrated Emergency Management System (IEMS) is one such item. Conceptualized by the Federal Emergency Management Agency (FEMA), the IEMS purpose is to develop generic plans and emergency capabilities that reflect common functions across all potential community hazards. Its specific objectives are to:

1. Save lives and protect property threatened by hazards.

2. Reduce duplication of efforts and resources.

3. Increase jurisdictional flexibility in upgrading the capacity to handle potential hazards.

4. Provide greater credibility and practical applications to states and local jurisdictions in their systems.

5. Integrate FEMA support and objectives with those state and local operational requirements.

Viewed in this manner, it becomes clear that existing fire service programs such as the Incident Command System (ICS) are part of the broader strategy of IEMS.

G. INCIDENT COMMAND SYSTEM (ICS): The ICS consists of four broad components: planning, operations, logistics, and incident command. The Incident Command System provides:

1. Organizational structure.

2. Standardized procedures.

3. Uniform terminology.

4. Improved communications.

5. Data collection system.

Taken collectively, these five features mean that ICS can readily adapt to new technology and new situations. In addition, implementation involves minimal disruption to existing departmental systems since it uses command elements of organization, structure, and terminology. Further information about the Incident Command System is available in the National Fire Academy courses: "Incident Command" (Resident); "Advanced Incident Command" (Resident); and "Incident Command System and Structural Firefighting" (Field).

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Emergency Medical Services Systems Development: A National Initiative

DAVID R. BOYD

Abstract—The passage of the Emergency Medical Services Systems (EMSS) Act of 1973 by Congress has provided the mechanism and funds for communities to develop regional EMS delivery systems across the Nation. With the passage of the EMSS Act, the Congress mandated that emergency medical care programs funded with Federal dollars must address, plan, and implement a "systems approach" for the provision of emergency response and medical care. In the EMSS Act, some fifteen component requirements have been identified to assist system planners, coordinators, and operators in their attempts to establish comprehensive, areawide and regional EMS programs. These components are: manpower, training, communications, transportation, facilities critical care units, public safety agencies, consumer participation, accessibility to care, transfer agreements, standard medical record keeping, consumer information and education, evaluation, disaster linkage, and mutual aid agreements. Development of a national program, its projects, and progress, is the basis of this report.

INTRODUCTION

CONSIDERABLE improvements are now being made in the delivery of emergency medical care, with major advances the result of the development of a "systems approach" and the integration of standardized vehicles, communications and medical equipment, training programs, emergency facilities, and critical care unit capabilities. Advances in on-site care by physician agents (Emergency Medical Technicians-Ambulance and Paramedics) in radio telecommunications with medical professionals have been shown to be effective in improving patient care for a wide variety of emergency, critically ill, and injured patient categories, especially those suffering from acute myocardial infarction and major trauma. Pioneering programs [1] in Miami, FL (Nagel); Nassau County, NY (Lambrew); Charlottesville, VA (Crampton); Seattle, WA (Cobb); and Illinois (Boyd) have illustrated the necessary systems design, treatment protocols, technical adaptations, facilities orientation, and organizational structure that are required for successful program development.

It is now quite apparent that significant improvements in emergency and critical care of all types of emergency patients can be realized if a sound integration of all of the essential components of an EMS system are logically structured and directed towards delivering ideal care to "real" *patients in need.* Heretofore, some debate has existed as to which component, or subsystem, is the most important. However, current consensus is that only a comprehensive EMS program, logically planned and staged, will develop and mature so that all patients in need will receive the most appropriate care in the prehospital, hospital, interhospital, critical care, and rehabilitative phases. An EMS system must then develop a sound sequence of comprehensive program activities on a regional basis if the needs of all potentially emergent patients are to be properly anticipated and receive adequate response.

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THE EMERGENCY MEDICAL SERVICES SYSTEMS ACT OF 1973

The passage of the Emergency Medical Services Systems (EMSS) Act of 1973 (P.L. 93-154) by Congress [2] has provided the mechanism and funds for communities to develop regional emergency medical services delivery systems across the nation. With the passage of the EMSS Act, the Congress mandated that the emergency medical care programs funded with Federal dollars must address, plan, and implement a "systems approach" for the provision of emergency response and medical care. In the EMSS Act, some fifteen component requirements have been identified to assist system planners, coordinators, and operators in their attempts to establish comprehensive, areawide and regional EMS programs. These components are listed below.

1) The provision of manpower.
2) Training of personnel.
3) Communications.
4) Transportation.
5) Facilities.
6) Critical care units.
7) Use of public safety agencies.
8) Consumer participation.
9) Accessibility to care.
10) Transfer of patients.
11) Standard medical record keeping.
12) Consumer information and education.
13) Independent review and evaluation.
14) Disaster linkage.
15) Mutual aid agreements.

The Division of Emergency Medical Services (DEMS), Department of Health, Education, and Welfare (HEW), the established Federal lead agency, has developed Program Guidelines in which under chapter III, [3] "Special Program Guidance," the clinical significance of the systems approach in developing an EMS system is described. While an EMS system must respond to all declared emergency calls within its appropriate geographic region (including the nonemergency

80 percent, the truly emergent 15 percent, and the critical cases—5 percent), there has been a special identification of those well identified critical patient groups which demand a competent system for survival. It is to the survival of these critical patients (trauma, burns, acute cardiac, high risk and premature infants, poisonings, psychiatric, drug, and alcohol overdose) that a "system" conceptualization and initial system efforts must be directed in order to insure the development of a sound, medically competent,and comprehensive EMS system.

EMERGENCY MEDICAL CARE ISSUES

The central theme and intent of the EMSS Act is to develop systems of emergency medical care that would significantly decrease current death and disability rates. The goal of the national EMS program is to initiate regional planning and integration of the fifteen mandatory components so as to provide the essential and appropriate EMS emergency and critical care services for all emergency patients.

The current EMS patient problem is compounded by the 65 million citizens who enter the system each year. At least 80 percent of these patients cannot be considered "true medical emergencies." Another 15 percent are real emergencies which require urgent care (i.e., minor trauma, infectious diseases, and other acute general medical and surgical problems). The remaining 5 percent are the critically ill and injured patients. This last group was not salvageable only a few years ago, but today, these lives can be saved if initial, definitive, and rehabilitative care is given in time and the patient is moved through the regional system and provided essential medical care.

Specific planning of regional EMS response to these particular critical care categories assumes that in time all critical medical emergencies will receive better care, and will benefit from sound regional EMS systems planning and operations.

Likewise, certain local occupational and/or recreational hazards must also be addressed with a goal toward prevention. These special target patient groups provide each regional system with an opportunity to develop evaluation criteria for systems performance and patient outcomes (distribution and survival).

EMS SYSTEMS DEVELOPMENT

Each regional emergency medical service plan must include a description of the general and specific protocols for the emergent and nonemergent patients in its delivery system. It must also include a detailed explanation of care and triage patterns for critical groups by identifying the patient treatment needs as well as the involvement of the systems operational components (vehicles, telecommunications, manpower, facilities). These care patterns will depend upon the clinical patient demands, the sophistication of the transportation capability, the level of care during transportation, the communications coordination, the delivery to a categorized general hospital or designated critical care facility, and the migration into the rehabilitation phase. These patient care programs must be established with appropriate backup relationships by written arrangements among the various provider elements in order to insure a sound and competent regional EMS system.

When an individual becomes seriously ill or injured it is manifested in a specific way. Patients have accidents. They have heart attacks. They are burned. They have problems at birth. They are poisoned with alcohol, drugs, or other toxicants. They have emotional disturbances resulting in varying degrees of psychiatric instability. The planners of EMS systems must consider the general patient population and these easily identifiable and significant critical patient groups that exist within the geographic regional area. An indepth knowledge of the demography, epidemiology, and clinical requirements associated with these critical patient groups is mandatory to effective EMS planning and operations.

In many circumstances the initial patient access, response, and transportation considerations are general in nature until the severity of the patient's (diagnostic-specific) problem becomes clarified. As soon as this clarification develops, a rather specific patient treatment and triage plan must be activated to include the prehospital, hospital, interhospital phases, as well as the specialty care unit and later the specific rehabilitation services necessary for each illness and injury.

It is now a fairly well accepted position across the country that initial and definitive medical care for each of the target patient groups can be improved. and most of these patients can be salvaged by an effective EMS system. The design of an EMS system will need to include certain organizational and operational changes. There must also be additional adaptations of treatment in the prehospital, hospital, and interhospital phases with proper modification of existing and new technology that will enable paraprofessional, and professionals to successfully manage and treat all emergent problems at the scene and during movement through the system whether they occur in urban, metropolitan, rural, or wilderness areas [4].

The development of an EMS system usually starts with an initial upgrading of existing resources and then progresses through periods of increasing sophistication. That is, following the establishment of a basic life support (BLS) system within the region, there usually is a logical progression to the advanced life support (ALS) system due to the increasing capabilities of the EMS region.

BASIC LIFE SUPPORT SYSTEM

A BLS system includes all of the fifteen components. However, certain ones are more critical, at least early on. BLS services can be effectively provided by the integration of nationally accepted minimal standards for ambulance personnel (e.g., Emergency Medical Technician-Ambulance, EMT-A [5], ambulances of the Department of Transportation (DOT) specification [6], two-way voice medical communications (VHF or UHF band) [7], and standard equipment as recommended by the American College of Surgeons [8]). Effective placement of these vehicles, staffed by two EMT-A's, can provide emergency medical care with patient stabilization, airway clearance, hemorrhage control, shock management with MAST trousers [9], initial wound care, and fracture stabilization. Under medical control (physician directed), specific noninter-

ventive treatment in which the EMT-A's have been previously trained can be applied. The transportation subsystem must be developed in the context of a sound hospital/critical care unit categorization program. The categorization of the facilities [10], [11] (hospital emergency department, critical care unit, and rehabilitation center) [12] is a major aspect of any program and is critical in the initial development of a BLS system. It gives identification and direction to all mobile, communications, transportation, and manpower elements at even the basic level, and makes possible the sound conceptualization of a delivery system for all emergency patients, while also providing a standard for clinical impact and EMS process evaluation. Most communities have begun their EMS systems in this manner, causing a considerable increase in public awareness of the need for improved EMS.

ADVANCED LIFE SUPPORT SYSTEM

Most urban communities, and now even [13] some rural regions, have progressed to an ALS system. This involved a much more sophisticated level of EMS systems planning and operations with highly skilled field personnel, EMT-Paramedics, trained to successfully identify and aggressively treat life-threatening emergencies (shock, cardiorespiratory failure, and cardiac dysrhythmias) at the scene and enroute to the hospital. At the ALS level, mobile units are equipped with appropriate intravenous fluids, drugs, and usually with some form of bioelectrical communications (telemetry). This enables paramedics with proper physician backup to perform expert diagnosis, treatment, and triage of critical patients. The need for a sound categorization of facilities during the BLS period is quite obvious due to the requirements for a medical communications control facility, and standardized treatment and regionwide triage protocols that ensure a progressive and continued enhancement of critical care for patients from the field to initial care facilities and on to the definitive advanced care facility, as is appropriate for each individual case and locale.

The components of an ALS system are as outlined here. ALS is the more sophisticated and logical progression of BLS, in which extensively trained EMT-Paramedics can provide true resuscitation (CPR) and specific interventive measures (e.g., endotracheal or esophagogastric intubation), intravenous therapy, specific cardiac dysrhythmia detection, and control with drugs and electrocountershock. These life savings techniques administered by EMT-Paramedics are always undertaken, except in rare circumstances, under the direct control of a physician or physician-surrogate in contact by voice and EKG telemetry. Most urban and many metropolitan communities (over 50 000 population) have initiated these ALS prehospital mobile intensive care unit (MICU) programs and have realized a major impact on the trauma, cardiac, and other critical patients. In many parts of the country, this increased capability of critical care will need to be developed not only in the central metropolitan areas, but also, with a further extension of satellite critical care units, in outlying community hospitals. This restructuring and resource development approach will affect primary and secondary transportation, communications, and EMS manpower, all of which must be upgraded to meet this advanced level of care, particularly in the prehospital and interhospital phases of development. While most of the activity in the ALS system is currently in the metropolitan areas, an appreciation of the need for ALS and critical care services for the rural and outlying areas is now developing. A national goal will be to realize these essential emergency and critical care services for the rural emergency patient at the scene and during the long transportation periods to distant appropriate treatment facilities.

It is these health care aspects that must be stressed in EMS planning and operations with detailed narratives of what the emergency care situation is, how the proposed EMS system will respond to an emergency patient in a certain locale, and how the patient will be evaluated, treated, and transported to an appropriate hospital or critical care unit.

REGIONALIZATION OF EMERGENCY MEDICAL SERVICES

A regional EMS system is one that is geographically described by existing natural patient care flow patterns. It must be large enough in size and population to provide definitive care services to the majority of general emergency and critical patients. Where highly sophisticated medical resources are not available within the region, arrangements must be made for obtaining these patient care services in an adjoining region. Various counties and cities will need to be grouped together. Therefore, the region will tend to be much larger than previously considered by independent local governmental operations. Identifying the regional EMS delivery area, with its critical patient origin and distribution patterns, is the essential issue in defining regional boundaries.

The regional EMS operational and organizing unit must attempt to pull together the EMS services within the entire medical-geographic area. The planning and evaluation process must be based upon sound clinical considerations with state, local, and interjurisdictional relationships being maintained. In these EMS regions the provider elements within the appropriate geographical area will need to work together to solve mutual problems. An EMS Council should be developed with advisory input into these regional EMS programs and encouraged to maintain contact with other local, regional, and state health and public safety authorities. The EMS region must be contiguous with the adjoining regions. Regional planners must recognize that population in the fringe areas of a region may need to develop dual plans and allow for intercommunications with adjoining regional EMS plans and operations. A coordination mechanism also must be developed between intrastate and interstate regions.

The EMS system must be integrated through an appropriate regional organization so that the total EMS resources can be effectively utilized to meet the needs of the geographical area. The financial resources of the region must be sufficient and mobilized to develop and sustain the EMS system operation. The EMS system must be interfaced with the total health care delivery system for the region. The EMS system resources must be linked to local disaster organizations in order to respond to sporadic high intensity needs of a natural disaster within the regional service area and adjoining service areas.

EMERGENCY MEDICAL SERVICES SYSTEM COMPONENTS

The EMSS Act of 1973 requires that plans developed and systems established, expanded, and improved with funds under this Act, address the following components.

1) Manpower–An adequate number of health professionals, allied health professionals, and other health personnel, including ambulance personnel, with appropriate training and experience.

This means sufficient numbers of all types of personnel to provide EMS on a 24-h a day basis, 7 days a week, within the service area of the system.

The EMS system must emphasize recruitment of veterans of the Armed Forces with military training and experience in health care fields and of appropriate public safety personnel in such areas. The major manpower elements to be considered are as follows:

- First Responders–fire, police, and other public safety elements;
- Communicators–EMS/Resources Dispatcher;
- Emergency Medical Technician–Ambulance (EMT-A);
- Emergency Medical Technician–Paramedic (EMT-Paramedic);
- Registered Nurses–Emergency Department;
- Registered Nurses–Critical Care Units;
- Physician–Emergency;
- Physician–Specialty (medical, surgical, pediatric, psychiatry);
- EMS Systems Medical Director;
- EMS Systems Administrator;
- EMS Systems Coordinators.

2) Training–The provision of appropriate training (including clinical training) and continuing education programs which a) are coordinated with other programs in the system's service area which provide similar training and education and b) emphasize recruitment and necessary training of veterans of the Armed Forces with military training and experience in health care fields, and of appropriate public safety personnel including: police, firemen, lifeguards, park rangers, and other public employees charged with maintaining the public safety.

3) Communications–Provisions for linking the personnel, facilities, and equipment of the system by a central communications system so that requests for emergency health care services will be handled by a communications facility which a) utilizes emergency telephonic screening, b) utilizes or will utilize the universal emergency telephone number 911, and c) will have direct communication connections and interconnections with the personnel, facilities, and equipment of the system and with other appropriate emergency medical services systems.

The EMS communications system should include a command and control center which is responsible for establishing those communications channels and allocating those public resources essential to the most effective and efficient EMS management of the immediate problem. The center should have the necessary equipment and facilities to permit immediate interchange of information essential for the system's resource management and control. The essentials of such a command and control center are that a) all requests for system response are directed to the center; b) all system response is directed from the center; and c) all system liaison with other public safety and emergency response systems is coordinated from the center.

The EMS communications system must address access, allocation of resources, management (central dispatch), and medical control for BLS and ALS.

In most states a physician must assume legal responsibility for all care rendered in an emergency at the scene of an incident and enroute to the hospital. Such supervision may take one of several forms depending upon resources available and the configuration of the system in a particular area. In most states, BLS measures are considered to represent emergency first aid and do not require strict medical supervision although a physician remains responsible for the training and actions of nurses and emergency medical technicians rendering such care. When ALS is required, physician supervision becomes mandatory. In most systems, medical supervision is provided through the availability of voice communications between a physician and emergency medical technician in the field. The communications may rely solely on a telephonic link from the scene of the incident to the physician, but usually involves radio communications or a combination of radio and telephone linkages between the EMT in the field and the physician. Although it is generally agreed that medical supervision may best be given by a physician located in a hospital, it is often not practical to do so, especially in rural areas where frequency of utilization of the emergency rescue service is low, and inhospital physicians on a 24-h a day basis are not available. In such areas, the EMT must be patched to the physician, via dedicated phone lines, in the major hospital within the region.

In most urban areas, medical supervision is provided through a central base hospital resource. It is emphasized here that it is quite impractical in terms of available frequencies and from the standpoint of expense to have every hospital in an urban area providing medical supervision to ambulances bringing patients to each of these hospitals. Most importantly, personnel at each of the receiving hospitals cannot be expected to be familiar with the radio equipment and communications procedure with resultant communications failures. Furthermore, where multiple users are sharing a frequency, information may become interchanged which may lead to errors in diagnosis and treatment. Therefore, for urban areas it is imperative that medical supervision be regionalized and confined to one base hospital communications center as appropriate to the needs of the area.

Telemetry of biological signals, primarily of the electrocardiogram (EKG) has been found to be a useful adjunct to voice communications especially in the treatment of the acute cardiac emergency. The absolute need for telemetry of the EKG will vary from system to system, again, depending upon the level of training of available rescue personnel and the frequency of exposure of such personnel to the need to monitor the EKG. In programs which use volunteer rescue personnel, telemetry becomes a more important adjunct than in programs

utilizing highly trained full time EMT's with a high frequency of exposure.

Treatment protocols for each major emergency are an important aspect of medical supervision. They provide a basis for the training of all EMT's and afford the opportunity for standardization of training programs on a regional basis, establish a medical legal standard of care for the patient with an emergent problem and, through a standardized approach to the patient, facilitate cooperation between rescue personnel in approaching a given problem and allow for meaningful evaluation of training efforts and patient outcome. Such protocols can be simple or complex as required by the patient type and will be influenced by such factors as the level of training of available rescue personnel and the length of transport time to the nearest appropriate medical facility. These treatment protocols must be approved by a consensus of area physicians, based on available national standards and implemented on a regional basis.

The supervising medical resource facility must be responsible for notification of the other receiving associate hospital so that it will be aware of the problem and what has already been done in order to expeditiously assume responsibility for the care of the patient immediately upon arrival. Furthermore, this communications resource facility should be responsible for decisions that relate to transportation triage of a patient to a special care unit in accordance with previously developed patient transfer guidelines and agreements. It should have the capability of hospital-to-hospital communications for the purpose of determining Emergency Department capability and bed availability information which is necessary in effective coordination of patient disposition. There must of course be a linkage between this regional resource facility and the responsible unit for dispatching all emergency vehicles.

The communications element should include the following.

Access providing public interface system to emergency resource system:
- 911.
- Alternative single access number.

Resource management function:
- Central Dispatch.
- Coordination of EMS and other public services.

Medical Control:
- Medical communications to hospital for triage, diagnosis, and treatment.

Hospital to Mobile Unit:
- Basic voice.
- Basic voice/advanced biomedical telemetry.

Hospital to Hospital Unit:
- Basic voice.
- Relayed biomedical telemetry.

4) Transportation—This component shall include an adequate number of necessary ground, air, and water vehicles and other transportation facilities properly equipped to meet the transportation and EMS characteristics of the system area. Such vehicles and facilities must meet appropriate standards relating to locations, design, performance, and equipment; and the operators and other personnel for such vehicles and facilities must meet appropriate training and experience requirements.

The elements of transportation should include the following.

Ground—Basic Life Support Elements:
- Ambulance vehicles meeting DOT/GSA specifications and including equipment recommended by the American College of Surgeons, HEW/DOT.
- Radio communications providing two-way voice for vehicle control and for medical control and consultation.
- At least two EMT-A's on each ambulance.
- Locations permitting (for 95 percent of all calls) a maximum of a 10 min response time in metropolitan areas.
- Locations permitting (for 95 percent of all calls) a maximum of a 30 min response time in rural areas.

Ground—Advanced Life Support Elements:
- All elements of a ground Basic Life Support component, plus personnel trained to the EMS-Paramedic level must address specific clinical items in medical service plan.
- Extra communications to provide advanced biomedical telemetry.
- Extra equipment for critical care procedures.

Air:
- Helicopters
  —Primary response—unique use depending on geographic constraints.
  —Secondary response, 30–150 mi transport radius.
- Fixed Wing
  —Greater response for 150 mi transport radius.
- Water
  —Special geographical considerations.
- Snow Mobile
  —Special geographical considerations.

5) Facilities—This component shall include an adequate number of easily accessible emergency medical service facilities which are collectively capable of providing service on a continous (24 h a day, 7 days a week) basis, which have appropriate standards relating to capacity, location, personnel, and equipment, and which are coordinated with other health care facilities of the system.

Categorization of the emergency capabilities of hospitals is an [14] established EMS systems concept [15]. Since the mid-1960's there has been considerable discussion about the need for the categorization of the general and specialty hospital emergency care capabilities on a regionalized basis. Medical professionals and organizations and interested health agencies have recognized and supported the need for adoption and implementation of EMS facility categorization. Unfortunately, little positive action has taken place in many states at the regional and local levels to implement programs that integrate the principles of established national categorization guidelines and that assess the individual hospitals' general and special care resources and potentials to effect sound regional EMS system development.

The concept of categorization of all emergency care facilities originates from the realization that emergency patients have varying magnitudes of injury and illness and that all hospitals have varying capabilities with which to provide adequate initial and/or definitive care. It is also realized that a categorization program must address the needs of all emergency medical patients and, therefore, deal with the growing numbers of nonemergent (primary care), truly emergent, and critically ill and injured patients. Effective categorization must involve all of the emergency receiving facilities and ascertain both the general (HORIZONTAL) and specialty (VERTICAL) care capability for all emergency patients. Categorization efforts should utilize the principles of established National Guidelines and in addition develop statewide criteria for implementation on a regional basis (CIRCULAR).

Categorization has relevance in urban, suburban, rural, and wilderness areas. The categorization concept will have additional significant effects on the utilization of EMS manpower and other EMS resources by eliminating duplication, providing additional data and information for improving EMS systems development, and should help check the spiraling costs of improved medical care. The basic purpose of categorization is to identify the readiness and capability of each hospital within a region to receive, diagnose, and treat all emergency patients, especially those with serious or critical injuries or illnesses, in an adequate and expeditious manner. Ambulance personnel, law enforcement and public safety officers, and the public must be knowledgeable of the designations of the hospitals within the region in order for the system to operate effectively and selectively utilize the appropriate hospital to which critically ill or injured patients are to be transported for treatment.

Elements for facilities consideration include the following.

- Regional categorization with accepted state or national criteria with at least one Category II hospital providing 24 h physician coverage in the emergency department in each EMS region.
- Regional EMS advisory groups to plan and carry out the categorization plan. These groups should include hospital administrators, physicians, nurses, other providers, and health system planners.
- Regional plans for mutual agreement of categories, use of critical care units, systems linkages (transfer agreements), and resource sharing.

6) Critical Care Units- This component requires providing access (including appropriate transportation) to specialized critical medical care units. These units should be in the number and variety necessary to meet the demands of the service area. If there were no such capabilities in the EMS region, then the system must provide access to such capabilities in neighboring regions.

Specialized critical medical care units should include trauma intensive care centers/units, burn centers/units, spinal cord centers, poison control and alcohol detoxification centers, coronary care units, high risk infant units, drug overdose and psychiatric centers, and others as appropriate.

A twofold issue here is the availability of critical care service units within the EMS region or in neighboring regions. Specialty care services should provide an adequate number of beds in the region or access to critical care units in neighboring areas. An operational plan for utilization of critical care units should be developed, including trained personnel, equipment and transportation, triage and interhospital treatment protocols. The EMS system should include the development of professional advisory groups (trauma, burn, cardiac, etc.) to work with EMS programs to insure that these critical services are being appropriately utilized and interrelate across political boundaries.

7) Public Safety Agencies–Provisions must be made for effective utilization of appropriate personnel, facilities, and equipment of each public safety agency in the area.

"Effective utilization" means the integration of public safety agencies into standard EMS and disaster operating procedures of the regional system. It also includes the shared use of personnel and equipment, such as helicopters and rescue boats, appropriate for medical emergencies.

Public Safety agency personnel are most frequently the first responders to an emergency patient. The EMS system must therefore work with these agencies to ensure the use of special equipment, proper training of staff, linked communications, and the development of cooperative operating procedures.

8) Consumer Participation–The EMS system must make provisions in its system management that persons residing in the area and having no professional training or experience may participate in the policy making for the system.

While there is no federally required percentage of consumer participation in EMS planning or advisory organizations, reasonable consumer representation should be provided. One approach would be to involve the committee of the advisory council of the local planning Agency which has consumer representation.

9) Accessibility to Care–The EMS system must provide necessary emergency services to all patients without prior inquiry as to the ability of the patient to pay.

The EMS system must not require evidence of the ability to pay prior to care for the services of ambulance, hospital, or critical care units. The system should provide the means to monitor for restrictive measures that may eliminate any person or group of people from equal quality of services within the region.

10) Transfer of Patients–The EMS system shall provide for transfer of patients to facilities which offer definitive follow-up care and rehabilitation as is necessary to effect the maximum recovery of the patient.

The transfer agreement is necessary to facilitate communication and cooperation of key professional providers (physicians) within the system. Actual letters that describe the transfer requirements for the critical target patients are essential contracts of regional EMS development. They not only open the radial lines of communications between the physician in the outlying area with a patient problem beyond his capability to the center physician with the necessary resources, but they also will establish the manner and mechanism by which

critical patients will be initially treated and retransported through the system. Only through this transfer agreement method will physicians at varying care capability levels come together and decide mutually on treatment, triage, educational, and evaluation protocols.

In urban areas, areawide prehospital treatment and triage protocols will have to be established by councils of key professional providers for the various specialty patient groups. These programs will necessarily "bypass" the nearest hospital as special critical cases are identified.

11) Standardized Patient Recordkeeping—Each EMS regional system shall provide for a standardized patient recordkeeping system which covers the treatment of the patient from initial entry into the system through his discharge from it, and shall be consistent with patient records used in follow-up care and rehabilitation of the patient [17].

The minimal patient records necessary for the EMS system are the dispatcher records, the ambulance records, the emergency department, and critical care records. In order to fulfill requirements of evaluation and reports to Congress, certain information must be available to be derived from these records.

- Patient identification information: the records must be designed so that the dispatcher record, ambulance record, and emergency department record on each patient can be compared for evaluation and management purposes.
- Patient access information: How did the patient access the system (arrive at emergency department)?
- Timing of ambulance services: response time, time at scene, and travel time to hospital.
- Patient condition: at scene, upon arrival in emergency department, and critical care unit.
- Patient treatment: at scene, during transport, in hospital.
- Patient diagnostic and treatment services: at emergency department, in hospital, and critical care unit.
- Disposition of patient: discharged, referred for outpatient care, referred to another hospital, admitted, died.
- Condition of patient: at discharge from emergency department, in hospital, and critical care unit.

12) Public Information and Education—The EMS system shall provide programs of public education and information for all people in the area so they know about the system, how to access it, how to use it properly, and how to pay for it. Successful systems operation depends not only upon the organizers, but also the participants. Continued support, particularly in the arena of competition for dollars, requires community commitment. To secure that commitment, the EMS system must keep its public informed. Programs should stress the general dissemination of information regarding appropriate methods of medical self-help and first-aid and the availability of CPR training programs, and other preventive oriented resources.

13) Independent Review and Evaluation—Each EMS system must provide for a) periodic, comprehensive, and independent review and evaluation of the extent and quality of the emergency health care services provided in the system's service area and b) submission to the Secretary of the reports of each such review and evaluation.

It is intended that such review and evaluation be periodic and comprehensive so that changes in emergency health care can be determined. The evaluation should be conducted by a qualified organization other than the grantee project personnel.

There is no intention to require sophisticated and expensive research oriented evaluation from funds granted under Sections 1203 and 1204. What is required is that persons not associated with the project conduct a review and evaluation of the extent and quality of the services provided. As a minimum the reviewer should have available:

- a description of the EMS resources, capability and performance measures at the start of the period being evaluated;
- a description of the interventions brought about during the period to include both clinical and EMS components;
- a description of the EMS resources, capability, and performance measures of the period being evaluated;
- clinical output or impact evaluations of death and disability should include the clinical patient target groups.

14) Disaster Linkage—The EMS system must have a plan to assure that the system will be capable of providing emergency medical services in the system's service area during mass casualties, natural disasters, or national emergencies.

The EMS system is not the regional health disaster organization. It is the emergency medical program that will work with other agencies during a disaster to provide emergency medical care. The EMS system must have links to the local, regional, and state disaster plans, and participate in exercises to test disaster plans at least biannually.

15) Mutual Aid Agreements—Each EMS system must provide for the establishment of appropriate arrangements with EMS systems or similar entities serving neighboring areas for the provision of emergency medical services on a reciprocal basis where access to such services would be more appropriate and effective in terms of the services available, time, and distance.

Arrangement among EMS regional systems and similar entities serving neighboring areas must be written agreements, signed by individuals authorized to act for the respective parties with respect to such agreements, and reviewed and reevaluated at least once a year. Such agreements should cover the exchange of service coverage, communication linkages, licensure and certification, and reimbursement.

EMS SYSTEMS MANAGEMENT

National experience with public and private funds has demonstrated that a few strategic factors are paramount to successful operations and management of an EMS system effort. The following elements must be addressed in order to develop and maintain an integrated total EMS system.

- Action Plan for EMSS Area—A comprehensive and detailed and progressive plan must be created for establishment, operation, and expansion of the EMS system.

- Lead Agency--A lead agency must be identified as the responsible operations unit for the EMS system including grants management control and operations coordination of the involved community and regional organizations and resources.
- Financial Support--Appropriate means of financial support for initial and continued EMS operations must be considered. Such financial support may be derived from various Federal programs, state and local funds, general revenue sharing funds, third party payments, and direct payments from patients.

The intent of the EMSS Act is to fund EMS projects on a multigovernmental and multicommunity basis. At the present time there are a few regions in the country where an "ideal" appropriate regional health authority exists. Such an organization or special health consortium must be developed usually with reliance on the established state health office (or major Metropolitan Health Agency) with its established management and regulatory capability for successful program initiation and support.

EMS LEGISLATION

The Emergency Medical Services Systems Act of 1973 called for "a study to determine the legal barriers to effective delivery of medical care under emergency conditions," [18]. The report of the Committee on Interstate and Foreign Commerce of the House of Representatives (H.R. Rep. No. 601, 93rd Cong., 1st Sess. 19 (1973)) stated that "legal barriers include situations where existing state laws prevent appropriate emergency services as well as situations where the absence of needed legislation fails to encourage and require such services." The report described some of the legal barriers which were included in testimony before the Committee, including: restrictive licensing laws, absence of laws requiring ambulance personnel to have adequate training, absence of laws requiring adequate design and equipment for ambulances, and inadequacies of state "Good Smaritan" laws.

The study revealed that the absence of enabling legislation at the state level rather than the presence of specific legislation provisions which preclude delivery of service, represent the major "legal barriers" to the development of regional systems of emergency medical care. Because of this, state legislatures should enact comprehensive laws to create and control the many components of the areawide emergency medical services system. State legislation should address the following areas:

- Definition of an areawide EMS system.
- Creation of a state governmental unit to plan, develop, and coordinate EMS activities in the state, emphasizing areawide systems with intersystem cooperation and including interstate cooperation.
- Ambulance services, including licensing of ambulances and ambulance services; standards for vehicle design, equipment for medical care and for communication; and personnel.
- Personnel, including definition of categories of personnel involved in EMS, training, and certification requirements, and explicit definitions of which services the various categories are authorized to perform under specific circumstances.
- Emergency medical facilities, including a requirement for participation in areawide systems and a requirement for systemwide categorization of hospitals by the level of care they can provide.
- "Good Samaritan" legislation.
- Responsibility for providing care, including responsibility of the general public, health professionals, ambulance services, and hospital emergency facilities.
- Financial responsibility for care, defining who is responsible for paying for care provided.

National program efforts will focus on how to assist state legislatures in implementing such legislation that will encourage the development of regional EMS systems. The EMS system will be enhanced and placed on more solid foundations by the enactment of adequate EMS legislation by state legislatures.

EMS SYSTEM EVALUATION

At this time it is impossible to determine how many lives are being saved and the amount that disability is being reduced because of EMS systems. To date, evaluation of the emergency medical care programs have been geared toward the survey approach, resources documentation, and data on subsystems (e.g., transportation, training, etc.). Essential data must be obtained to evaluate the clinical effectiveness of regional EMS systems. There must be developed new methodologies for "tracking" and evaluating emergency medical care for specific patient groups, e.g., trauma, burns, etc., within the system. These analyses will allow programmatic decisions as to the appropriateness of utilization of facilities, personnel, equipment, clinical treatment, and cost effectiveness.

The following should be the basic ingredients for the development of an evaluation strategy. It is appreciated that at present the "state of the art" of systems evaluation is rather primitive across the country. This is consistent with the relative development stage of most EMS systems at this time. As EMS projects grapple with the multiple components and organizational changes, they must also comprehend the basic precepts of evaluation methodology [19].

The following are basic to an evaluation strategy.

a) Development of a descriptive narrative of the organization's operational components, and "clinical systems" design and implementation. A key evaluation task for each program will be that of the narrative description of the relative systems changes implemented and perceived as the EMS system develops. This essential evaluation component cannot be overlooked and is essential for subsequent steps b), c), and d), described below.

b) Structural analysis and resource development. In this area one must describe some of the key implementation aspects (radio-installed, ambulances placed, etc.) that are well identified phonemena of an EMS program. These will be necessary in the area of organization and management, at least the six clinical tracer and impact groups, and at least one parameter for each of the fifteen components.

This inventory assessment will describe these key structural phenomena and provide some guidance as to the quality of

each parameter. (impiementation of 911, dispatch, categorization). Much of this data will include resources data for program information sources. Of these parameters within each of these areas some will be of state or national signifiance.

c) EMS activities or processes. Those structural components now implemented (e.g., communications, 911 dispatchers, ambulances, trauma units, etc.) all have activity levels which can be counted using operations data; for instance, counting trauma victims admitted to a specialized designated trauma unit, or the numbers of calls via the 911 access number. With this approach even during the initial years, a program will be capable of monitoring the very basic process elements of the system and will be able in future years to develop ratios, indices, and correlations among or between systems components.

Rates of utilization and appropriate clinical and cost benefit data can subsequently be developed. Section c) will also have some parameters of national significance but more importantly this data will be most useful to the actual operation, management, and development for each system.

Again, this type of basic information is necessary and relates to section d).

d) Patient outcome and program impact. In this section, critical clinical questions must be enunciated in the evaluation strategy, and the evolution from simple to complex evaluation approaches will parallel each system's growth and maturity. There are at least four types of impact evaluation essential to documentation of a comprehensive and successful system.

1. Compliance studies. As the program narratives are developed (section a), resources developed (section b), and activity levels counted (section c), the effect of these on critical patient groups will be seen. The care of a patient at the scene, transport to a facility following a described program narrative (e.g., critical major trauma, sent to a trauma center) can be counted at the center and with surveys for similar patients in nondesignated facilities will give patient "fit" or compliance to a prior "care system" set. The first such patient and all subsequent patients "test" the system in this tracer method.

In the initial years of most programs, this simple analysis is possible and will relate to patient "systems" compliance and later outcome effectiveness.

2. Death and disability impact can be measured by national norms, peer judgments, or using newly developed indices of morbidity.

Interest here will obviously be along the lines of hard data (e.g., lives, deaths), and these can only be attributed to the system's effectiveness if in fact the patient was responded to and "processed" appropriately through the system according to established protocols.

3. As EMS systems mature, studies of death and disability on regional bases will be possible and necessary to show that these changes in death risk for a certain emergency are operative throughout the entire geographic region. So far only two such papers have appeared in the literature.

4. And finally, the evaluation of treatment effects, therapy alternatives, program options, phases of implementation, and other experimental studies, will be possible in regional programs as the level of maturity and sophistication progresses, sound BLS and ALS systems.

This very basic but progressive evaluation strategy will provide a graduated experience in evaluations methodology for newly developing EMS programs.

Peer review has achieved great national importance among physicians in the United States in the past several years, consequent upon Federal legislation mandating PSRO and hospital quality assurance programs. Emergency medical care also requires peer review, not only from the standpoint of physician performance but also with nursing and EMT-A and EMT-Paramedic personnel. Professional and paraprofessional alike should critique the delivery of their specialized services within the system on a regular basis. Likewise, emergency room personnel have a responsibility to review overall performance of their colleagues, in order to upgrade care, identify deficiencies in training or equipment, and to rectify any errors which inevitably will creep into the EMS system.

DEVELOPMENT OF REGIONAL EMS SYSTEMS

During the first two years of the Program, 235 of the 300 state designated EMS Regions have received funding under the Emergency Medical Services Systems Act of 1973. One hundred and ten of these regions, serving a population of 77 000 000 are in some phase of operational development: 83 are developing a BLS capability under Section 1203, and 27 are developing an ALS capability under Section 1204. In addition, 125 regions covering a population of 87 500 000 have prepared plans for the development of regional systems under Section 1202.

A year-by-year summary of activity follows.

Fiscal Year 1974

Eighty-five grants covering 126 regions and serving a population of 88 200 000 were awarded in the amount of $17 000 000.

Section of Act	Number of Grants	Number of Regions	Dollar Amount	Population Served
1202	53	90	$ 2 250 000	63 000 000
1203	21	27	10 400 000	18 900 000
1204	11	9	4 350 000	6 300 000
Total	85	126	$ 17 000 000	88 200 000

Fiscal Year 1975

One hundred and sixteen grants, covering 174 regions and serving a population of 121 800 000 were awarded in the amount of $32 242 800.

Section of Act	Number of Grants	Number of Regions	Dollar Amount	Population Served
1202	56	82	$ 4 617 800	57 400 000
1203	49	66	19 500 000	46 200 000
1204	11	26	8 125 000	18 200 000
Total	126	174	$32 242 800	121 800 000

Extensions were also approved during fiscal year 1975 for 18 regions that were awarded grants in fiscal year 1974: 17 under Section 1203 and 1 under Section 1204.

Fiscal Year 1976

Fifty two grants covering 63 regions and serving a population of 44 100 000 were awarded in the amount of $29 115 300.

Section of Act	Number of Grants	Number of Regions	Dollar Amount	Population Served
1203[1]	41	51	$21 836 475	35 700 000
1204	11	12	7 278 825	8 400 000
Total	52	63	$29 115 300	44 100 000

Because of constraints in the current Act, no new regions will be planned or new systems will begin operations during fiscal year 1976.

Training

Section 776 of the Act provided funds for training during fiscal year 1974 only. Under this section, 76 grants and 2 contracts were awarded in the amount of $6 666 869. These awards provided training for 36 350 individuals:

Discipline	Number of Trainees
EMT (Basic and Advanced)	25 000
Emergency Department Nurses	4000
Emergency Department Physicians	1200
EMS Administrators/Coordinators	150
Other	6000
Total	36 350

Under other authorities, the Health Resources Administration continued to fund applications for EMS training during fiscal year 1975. They awarded 9 grants in the amount of $813 191 under Section 772, health professions special grants and contracts, and 39 grants in the amount of $4 432 492 under Section 792, grants to improve the quality of training for allied health professions.

Research

In fiscal year 1974, five grants and 14 contracts were awarded in the amount of $3 311 000 under Section 1205. In fiscal year 1975, 14 grants and four contracts were awarded in the amount of $4 444 474 under Section 1205. These awards supported research in the four major categories described in Section 1205 (a).

Category	Dollar Amount
I. Medical Techniques	$1 022 766
II. Methods	3 657 995
III. Devices	2 181 326
IV. Delivery	892 476
Total	$7 754 474

[1] Funding limited to second year awards under Section 1203, and first and second year awards under Section 1204.

DISCUSSION

The time has come in this country when a strong positive force must coordinate all of the excellent, well developed medical resources and available technology to impact upon and improve patient care services for all emergency patients. The EMS problem was identified in 1966 by the National Research Council in "Accidental Death and Disability: the Neglected Disease of Modern Society," [20] and is now an accepted soluble nationwide medical problem.

The heretofore frequently isolated islands of excellence have often been separated by areas of confusion and fragmentation into single component emergency care efforts. In addition, there are many communities where emergency care is poor because of disarray, even disrepair, in terms of providing a system of emergency care, especially in the rural, the wilderness, and inner city areas. Previous local, state, and Federal initiatives have addressed single components or those parts of a system that seemed to represent the most acute and obvious need at the time. It is now apparent that a system must include all of the 15 components and is no more effective than its weakest links. Further development of one or two of the chosen strong links will not make the chain stronger and will not create a better system of care for the critically ill or injured victim. The "nonsystems" approach has been due to a combination of local ignorance, provincial prerogative, and lack of guidance by the Federal Government. The passage of the EMSS Act of 1973 now provides an opportunity to establish health priorities for emergency medical care at the local, regional, state, and national levels of our society, and to foster the development of a comprehensive and sound EMS systems approach that will affect all communities, especially the rural, the economically depressed, and the medically underserved areas.

ORGANIZATIONAL RESPONSIBILITIES

It is now quite obvious that an EMS system must incorporate a certain well identified and credible organizational unit to coordinate all of the various provider, community, and governmental interests. This unit must be the focal point for ensuring the system's integration from a systems access, a first responder's identification [1], communications coordination, patient transportation (primary and secondary), initial hospital, critical care facilities as well as linkages into rehabilitation. While no individual organization has the responsibility for all of these components, the operations unit must coordinate these many activities of the EMS system and must represent the professionally and publicly supported EMS Services Council for policy development, advice, grievances, and resources utilization.

CRITIQUE OF EMERGENCY AND CRITICAL CARE DELIVERY

It is now well recognized that patients are still being lost unnecessarily because of systems failure, not simply because of neglect of injuries or severity of medical problems. Prior to

current trends in management, many emergency cases were, more or less justifiably, treated conservatively because of the attitude that they were too "sick" to get well. Now that well established techniques of resuscitation and emergency medicine and surgery have been disseminated, an extremely aggressive approach in prehospital and hospital care phases is being shown to salvage lives. This sophisticated, aggressive, and coordinated approach to emergency care is not without significant cost and demands in terms of emergency medical services resources, especially manpower. Only by a consolidation of experience, personnel, vast medical resources, operating rooms, intensive care, X-ray, blood banks, etc., on a regional basis can such a program be developed and supported by the civilian community.

The concept of adequate emergency medical care requires an organizational responsibility which provides sound planning for the prehospital and hospital critical care services; and must engender community and region wide patient triage with well established, practical, and refined medical care plans that involve the care at the scene during transportation, in hospitals, and critical care phases of patient services. The whole aggressive systems approach must be without weaknesses or gaps, and continually needs to be reassessed and evaluated to assure optimal operation.

FEDERAL INVOLVEMENT IN EMS DEVELOPMENT

A large body of representatives from the many interested professional medical and health groups appeared in Washington in 1971, and testified at the Congressional Hearings on the Emergency Medical Services Systems Development Act of 1972, unanimously supporting the critical need for improvement of care of emergency patients. They also indicated that such care should and would be improved by the systems approach. Much of this testimony was given by witnesses from organizations who stated that they were convinced that the following pertains. "An environment now exists in the nation for the development of comprehensive total emergency medical services systems on a regional and statewide basis. The lack of provision for emergency illness, accidental death, and disability can no longer be classified as an insoluble health problem, as medical expertise and technology are available in this country which can easily be applied to this previously neglected situation." The essence of the opinions and precepts stated by those interested in the national EMS problem was that the "neglected disease of modern society" could now be effectively handled by efficient utilization of expert care principles and by organizing and improving, in each community across the nation, the existing and developing EMS resources and care capabilites. It was obvious that Federal direction would be an essential catalyst for a national EMS systems development program.

This organized systems approach to the care of emergency victims has been proven already in some areas. It has also been proven that by such a systems approach, a more effective return on the current and future investments of Federal dollars can be anticipated.

EMS AS A COMPONENT OF THE TOTAL HEALTH CARE DELIVERY SYSTEM

The coordination of established medical services and public safety efforts brings the emergency medical care program to an interface with community service activities heretofore outside the scope of established medical practice. Community involvement by a wide spectrum of the public, private, and governmental entities gives an emergency medical service system a new dimension to health care that has not previously been a major consideration in American medical practice. An additional result of the regional EMS system effort will be the demonstration of how other essential nonemergent health services and programs might be stylized similar to EMS on a geographic and service demand basis. Some experience already suggests that programs such as blood, organ transplantation, and rehabilitation services as well as quality assurance programs might be enhanced by regional systems models.

The national EMS system effort will improve the quality of care for the critically injured and ill citizens across the country. Due to its unique characteristics, emergency medical care provides a rare opportunity for experience in many other phases of health care delivery. It is anticipated that the "ripple effect" in the EMS effort may extend beyond the limits of acute care phases to many functional component areas.

The success of any EMS system is dependent upon the wisdom of its leadership and appropriate integration of resources, operations management, and financial planning into an effective program. The major task of the Division of Emergency Medical Services is to provide current and timely technical assistance and guidance by communicating results of lessons learned from established and ongoing operational EMS projects.

REFERENCES

[1] D. R. Boyd *et al.*, "Regionalization of trauma patient care: The Illinois Experience," in *Surgery Annual*, L. M. Nyhus, Ed. New York: 1975, pp. 25–52.

[2] Public Law 93-154: *Emergency Medical Services Systems Act of 1973*. 93rd Congress, 5.2410. 1973.

[3] *Emergency Medical Services Systems: Program Guidelines.* U.S. Department of Health, Education, and Welfare, Health Services Administration, Division of Emergency Medical Services. Revised 1975. (HSA-75-2013)

[4] *Selected Bibliography: Rural Emergency Medical Services.* U.S. Department of Health, Education, and Welfare, Health Services Administration, Division of Emergency Medical Services. 1976. (HSA-76-2028)

[5] *Training of Ambulance Personnel and Others Responsible for Emergency Care of the Sick and Injured at the Scene and During Transport.* National Research Council, National Academy of Sciences, 1968. (HSA-74-2027)

[6] *Federal Specifications–Ambulance–Emergency Medical Care Vehicle.* U.S. General Services Administration. January 2, 1974 (with revision). 1974. (Specification KKK-A-1822)

[7] *Medical Communications Services.* U.S. Federal Communications Commission. Federal Register 39:26116-26126, July 16, 1974, also, *Emergency Medical Services Communication Systems.* U.S. Department of Health, Education, and Welfare, Emergency Medical Services Program. 1972 (HRA-74-3209)

[8] *Essential Equipment for Ambulance.* Bulletin. American College of Surgeons, pp. 7–13, May 1970.

[9] B. H. Kaplan, *et al.* "The military anti-shock trouser in civilian prehospital emergency care," *Journal of Trauma*, 13:843–848. Oct. 1974.
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[11] D. R. Boyd *et al.*, "Categroization of Hospital Emergency Medical Capabilities in Illinois: A Statewide Experience," *Illinois Medical Journal*, 146:(reprint), July 1974.
[12] D. R. Boyd, *EMS Systems Development: A National Initiative.* IEEE (In Press).
[13] *Proceedings of the National Conference on Standards for Cardiopulmonary Resuscitation (CPR) and Emergency Cardiac Care (ECC).* Washington, D.C. American Heart Association and National Academy of Sciences. 1973.
[14] *Categorization of Emergency Medical Capabilities of Hospitals.* U.S. Department of Health, Education, and Welfare, Health Services Administration, Division of Emergency Medical Services, 1975. (Working paper for Categorization Symposium, Chicago, Ill., Sept. 9–10, 1975)
[15] *Recommendations of the Conference on the Guidelines for Categorization of Hospital Emergency Capabilities.* Chicago. American Medical Association. 1971.
[16] *Selected Bibliography: Categorization of Hospital Emergency Services.* U.S. Department of Health, Education, and Welfare, Health Services Administration, Division of Emergency Medical Services. 1975. (HSA-76-2026)
[17] *Development of a Minimum Data Set for Emergency Medical Services Patient Record Keeping.* Silver Spring, Maryland. Macro Systems, Inc. 1974. 3 vols.
[18] *Report to Congress: Legal Barriers to the Effective Delivery of Emergency Medical Services.* U.S. Department of Health, Education, and Welfare, Health Services Administration. 1975.
[19] W. Pizzano, B. A. Flashner, and S. Adams, *Evaluation Workbook for EMS.* Washington, D.C.: Arthur Young & Co. 1976.
[20] *Accidental Death and Disability: The Neglected Disease of Modern Society.* National Research Council. National Academy of Sciences. 1966.

UNIT III
RESOURCES

UNIT III

RESOURCES

In this unit, you will be informed of private and federal resources for grants, training, publications, newsletters, and technical assistance needed by EMS managers.

At the end of the unit, you should be able to:

1. Explain the role of several federal agencies in supporting EMS system development.
2. Identify several agencies (public and private) which are likely sources of the resources you need to achieve your goals.

In this unit, we will do the following:

1. Learn about the role federal and private organizations can play in supporting EMS Systems.
2. Practice selecting and locating EMS resources.

The students' attention is directed to the Instructional Resources list. It would be advisable to familiarize yourself with the functions of the agencies listed. Some general comments on obtaining/using resources are:

1. Allow sufficient time for the organization to process your request. "Rush jobs" invariably place a strain on your future dealings with an agency.

2. Generally, it is best to make telephone contact with an organization to state your request. If they indicate that they can assist you, a letter from you will confirm what you want.

3. Tell your EMS friends about any useful resources you discover. Many of these agencies keep tallies of "user services provided." Future funding of a particular resource often hinges on their ability to show a high volume of assistance requests.

4. Simple courtesy and common sense indicate that a "thank you" letter, if appropriate, should be completed and sent to an agency. Everyone tries harder when they know that their services are needed and appreciated.

5. Don't overlook other EMS managers as resources. Somebody somewhere has probably grappled with a problem much like the one you're working on now.

NOTE TAKING GUIDE

NOTETAKING OUTLINE

Please refer to the list of resource agencies, which have been arranged to include a notetaking outline.

ORGANIZATION RESOURCE LIST

FEDERAL AGENCIES	GRANTS	TRAINING	PUBLICATIONS	NEWSLETTER	TECHNICAL ASSIST.
Department of Health and Human Services, Office of Emergency Medical Services	*		*		
Department of Transportation, Emergency Services Branch	*	*	*		*
Federal Emergency Management Agency National Fire Academy		*			
Federal Emergency Management Agency U.S. Fire Administration			*	*	*

PRIVATE ORGANIZATIONS (EMS Related)

	GRANTS	TRAINING	PUBLICATIONS	NEWSLETTERS	TECH. ASSIST.
American Trauma Society		*	*	*	*
Emergency Care Information Center			*	*	*
Emergency Care Research Institute			*	*	*
Emergency Medical Service Information Center			*		*
EMS Management Institute		*	*	*	*
ISFSI EMS Instructors Section		*	*	*	*
National Association Of Emergency Medical Technicians		*	*	*	*

PRIVATE ORGANIZATION (Non-EMS)

	GRANTS	TRAINING	PUBLICATIONS	NEWSLETTERS	TECH. ASSIST.
American Management Association		*	*		*
American Society Of Association Executives		*	*		*
The Foundation Center			*		
The Grantsmanship Center		*	*		*
National Center For Citizen Involvement		*	*		*
National Technical Information Service			*		
Smithsonian Science Information Exchange			*		

1984 EMS
INSTRUCTIONAL RESOURCES

(Listed Alphabetically)

ADMINISTRATIVE MANAGEMENT SOCIETY
2360 Maryland Road
Willow Grove, Pennsylvania 19090

Notes:

AMERICAN ACADEMY OF ORTHOPEDIC SURGEONS
444 North Michigan Avenue
Chicago, Illinois 60601
(312) 822-0970

Notes:

AMERICAN ACADEMY OF PHYSICIAN'S ASSISTANTS
2431 Jefferson Davis Highway, Suite 700
Arlington, Virginia 22202

Notes:

AMERICAN ALLIANCE FOR HEALTH, PHYSICAL EDUCATION,
RECREATION, AND DANCE
1900 Association Drive
Reston, Virginia 22901

Notes:

AMERICAN AMBULANCE ASSOCIATION
141 21st Street, Suite 404
Sacramento, California 95814
(916) 448-5223

Notes:

AMERICAN ASSOCIATION FOR ADULT AND
CONTINUING EDUCATION
1201 16th Street, N.W., Suite 301
Washington, D.C. 20036

Notes:

AMERICAN ASSOCIATION FOR THE ADVANCEMENT OF
COMMUNICATION TRAINING
1728 Morgan Lane
Redondo Beach, California 90278

Notes:

AMERICAN ASSOCIATION FOR HIGHER EDUCATION
One Dupont Circle, Suite 600
Washington, D.C. 20036

Notes:

AMERICAN COLLEGE OF EMERGENCY PHYSICIANS
P.O. Box 61911
Dallas, Texas 75261
(214) 659-0911

Notes: Sponsors EMS Information Center

AMERICAN COLLEGE OF SURGEONS
Committee on Trauma
55 East Eire Street
Chicago, Illinois 60611
(312) 664-4050

Notes:

AMERICAN EDUCATIONAL RESEARCH ASSOCIATION
1230 17th Street, NW
Washington, D.C. 20036

Notes:

AMERICAN HEALTH CARE ASSOCIATION
1200 15th Street, NW
Washington, D.C. 20005

Notes:

AMERICAN HEART ASSOCIATION
44 East 23rd Street
New York, New York 10010

Notes:

AMERICAN HOSPITAL ASSOCIATION
840 North Lake Shore Drive
Chicago, Illinois 60611

Notes:

AMERICAN MANAGEMENT ASSOCIATION
135 West 50th Street, N.W.
New York, New York 10020
(212) 586-8100

Notes: Widely respected source of general management information

AMERICAN MEDICAL ASSOCIATION
Emergency Medical Services Section
535 North Dearborn Street
Chicago, Illinois 60610
(312) 751-6000

Notes:

AMERICAN NATIONAL RED CROSS
17th and D Streets
Washington, D.C. 20006

Notes:

AMERICAN PSYCHOLOGICAL ASSOCIATION
1200 17th Street, NW
Washington, D.C. 20036

Notes:

AMERICAN SOCIETY FOR ASSOCIATION EXECUTIVES
1575 I Street, NW
Washington, D.C. 20005

Notes: Publishes variety of nonprofit agency reference material

AMERICAN SOCIETY FOR HEALTHCARE, EDUCATION
AND TRAINING
840 North Lake Shore Drive
Chicago, Illinois 60601

Notes:

AMERICAN SOCIETY FOR TRAINING AND DEVELOPMENT
600 Maryland Avenue, SW, Suite 305E
Washington, D.C. 20024

Notes:

AMERICAN TRAUMA SOCIETY
875 N. Michigan Avenue
Chicago, Illinois 60611

Notes: Offers Public Relations Guidebook, information on trauma reduction, technical assistance through state divisions

ASSOCIATION FOR CONTINUING HIGHER EDUCATION
Communications Building, Room 432
University of Tennessee
Knoxville, Tennessee 37996

Notes:

ASSOCIATION FOR EDUCATIONAL COMMUNICATIONS
AND TECHNOLOGY
1201 16th Street, NW
Washington, D.C. 20036

Notes:

ASSOCIATION FOR INTERNATIONAL PRACTICAL TRAINING
217 American City Building
Columbia, Maryland 21044

Notes:

ASSOCIATION FOR SUPERVISION AND CURRICULUM DEVELOPMENT
225 North Washington Street
Alexandria, Virginia 22314

Notes:

AUDIO VISUAL MANAGEMENT ASSOCIATION
P.O. Box 821
Royal Oak, Michigan 48068

Notes:

COUNCIL FOR THE ADVANCEMENT OF EXPERIMENTAL LEARNING
Lakefront North, Suite 300
Columbia, Maryland 21044

Notes:

DEPARTMENT OF HEALTH & HUMAN SERVICES
Office of Emergency Medical Services
P.O. Box 911
Rockville, Maryland 20852
(301) 436-6267

Notes: Administered Title 12 program for EMS System development

DEPARTMENT OF TRANSPORTATION
Emergency Medical Services Branch
Enforcement & Emergency Services Division
National Highway Traffic Safety Administration
400 Seventh Street, S.W.
Washington, D.C. 20590
(202) 472-5440

Notes: Ambulance standards, courses for EMT, EMT refresher, EMT paramedic, copyright on "Star of Life"

EMERGENCY MEDICAL SERVICES BRANCH
National Highway Traffic Safety Administration
Department of Transportation
400 Seventh Street, SW
Washington, D.C. 20590

Notes:

EMERGENCY CARE INFORMATION CENTER
P.O. Box 457
Wilton, Connecticut 06897
(203) 762-3911

Notes: Offers monthly update on EMS-related media and periodical

EMERGENCY CARE RESEARCH INSTITUTE
5200 Butler Pike
Plymouth Meeting, Pennsylvania 19462
(215) 825-6000

Notes: Publishes research and updates on health-related devices and technology.

EMERGENCY DEPARTMENT NURSES ASSOCIATION
666 North Lake Shore Drive
Chicago, Illinois 60671
(312) 649-0297

Notes:

EMS MANAGEMENT INSTITUTE
107 East Holly Avenue, Suite 12
Sterling, Virginia 22170
(703) 450-6097

Notes: Information clearing house specifically on EMS Management, publishes "MUTUAL AID NEWSLETTER, conducts seminars.

EMERGENCY MANAGEMENT INSTITUTE
National Emergency Training Center
Federal Emergency Management Agency
16825 South Seton Avenue
Emmitsburg, Maryland 21727
(800) 638-9600

Notes: "Pre-Hospital Response to Radiation Accidents" course; "Introduction to EMS for Emergency Program Managers" course; funded A.C.E.P. "Disaster Planning and Management for Emergency Physicians" course.

EMERGENCY MEDICINE MANAGEMENT ASSOCIATION
1101 Connecticut Avenue, N.W., Suite 700
Washington, D.C. 20036
(202) 857-1146

Notes: Addresses administration in the field of emergency medicine, publishes "Lifeline" newsletter, conducts workshops.

EMERGENCY MEDICINE RESIDENTS' ASSOCIATION
P.O. Box 61911
Dallas, Texas 75261
(214) 659-0920

Notes:

FEDERAL EMERGENCY MANAGEMENT AGENCY
National Emergency Training Center
16825 South Seton Avenue
Emmitsburg, Maryland 21727
(800) 638-9600

Notes: Resident 2-week course, (Mangement of EMS for the Fire Service); Field 2-day course (EMS Administration)

HEALTH EDUCATION MEDIA ASSOCIATION
P.O. Box 771
Riverdale, Georgia 30274

Notes:

HEALTH SCIENCES COMMUNICATION ASSOCIATION
Route 5, Box 311-F
Midlothian, Virginia 23113

Notes:

INSTRUCTIONAL SYSTEMS ASSOCIATION
84 State Street, Second Floor
Boston, Massachusetts 02109

Notes:

INTERNATIONAL ASSOCIATION OF BUSINESS COMMUNICATORS
870 Market Street, Suite 940
San Francisco, California 94102

Notes:

INTERNATIONAL ASSOCIATION OF FIRE CHIEFS
1329 18th Street N.W.
Washington, D.C. 20036
(202) 833-3420

Notes:

INTERNATIONAL ASSOCIATION OF FIREFIGHTERS
1750 New York Avenue, N.W.
Washington, D.C. 20006
(202) 872-8484

Notes:

INTERNATIONAL ASSOCIATION OF QUALITY CIRCLES
P.O. Box 30635
Midwest City, Oklahoma 73140

Notes:

INTERNATIONAL FEDERATION OF TRAINING
AND DEVELOPMENT ORGANIZATIONS

c/o Vincent A. Miller
923 State Street
St. Joseph, Missouri 49085

Notes:

INTERNATIONAL SOCIETY OF FIRE SERVICE
INSTRUCTORS, EMS INSTRUCTOR SECTION
20 Main Street
Ashland, Massachusetts 01721
(617) 881-5800

Notes: New EMS instructor section formed March 1981, publishes "EMS Section News".

INTERNATIONAL SOCIETY FOR INDIVIDUALIZED
INSTRUCTION
P.O. Box 1090
Lawrence, Kansas 66044

Notes:

NATIONAL ASSOCIATION OF EMERGENCY MEDICAL
TECHNICIANS
Society of EMS Administrators
P.O. Box 334
Newton Highlands, Massachusetts 02161
(617) 894-7179

Notes: Seminar programs

NATIONAL ASSOCIATION FOR PUBLIC CONTINUING
AND ADULT EDUCATION
1201 16th Street, NW
Washington, D.C. 20036

Notes:

NATIONAL ASSOCIATION OF STATE EMS DIRECTORS
Office of Emergency Medical Services
Department of Health and Social Services
482 Hathaway Building
Room 528
Cheyenne, Wyoming 82002
(307) 777-7955

Notes:

NATIONAL AUDIO-VISUAL ASSOCIATION
3150 Spring Street
Fairfax, Virginia 22031

Notes:

NATIONAL CENTER FOR CITIZEN INVOLVEMENT
P.O. Box 4179
Boulder, Colorado 80306

Notes: Information on attracting, managing, and maintaining citizen volunteer workers

NATIONAL CENTER FOR HEALTH EDUCATION
211 Sutter Street, Fourth Floor
San Francisco, California 94108

Notes:

NATIONAL COMPUTER GRAPHIC ASSOCIATION
8401 Arlington Boulevard
Fairfax, Virginia 22031

Notes:

NATIONAL COUNCIL OF STATE EMS TRAINING COORDINATORS
Emergency Medical Services Bureau
State Department of Health and Environmental Sciences
Cogswell Building
Helena, Montana 59601
(406) 449-3895

Notes:

NATIONAL EDUCATION ASSOCIATION
1201 16th Street, NW
Washington, D.C. 20036

Notes:

NATIONAL REGISTRY OF EMERGENCY MEDICAL TECHNICIANS
P.O. Box 29233
Columbus, Ohio 43229

Notes:

NATIONAL REGISTRY OF EMERGENCY MEDICAL TECHNICIANS
P.O. Box 29233
Columbus, Ohio 43229
(614) 888-4484

Notes:

NATIONAL SAFETY COUNCIL
444 North Michigan Avenue
Chicago, Illinois 60611

Notes:

NATIONAL SOCIETY FOR PERFORMANCE AND INSTRUCTION
1126 16th Street, NW, Suite 315
Washington, D.C. 20036

Notes:

NATIONAL TECHNICAL INFORMATION SERVICE
5285 Port Royal Road
Springfield, Virginia 22161
(703) 487-4600

Notes: Computer search facilities available

SOCIETY FOR INTERCULTURAL EDUCATION,
TRAINING, AND RESEARCH
1414 22nd Street, NW, Suite 102
Washington, D.C. 20037

Notes:

SOCIETY OF TEACHERS OF EMERGENCY MEDICINE
P.O. Box 61911
Dallas, Texas 75261
(214) 659-0921

Notes:

SPEECH COMMUNICATION ASSOCIATION
5105 Backlick Road
Annandale, Virginia 22003

Notes:

THE FOUNDATION CENTER
888 Seventh Avenue
New York, New York 10019

Notes: Information on foundations which may be funding sources

THE GRANTSMANSHIP CENTER
1031 S. Grand Avenue
Los Angeles, California 90015
(213) 749-4721

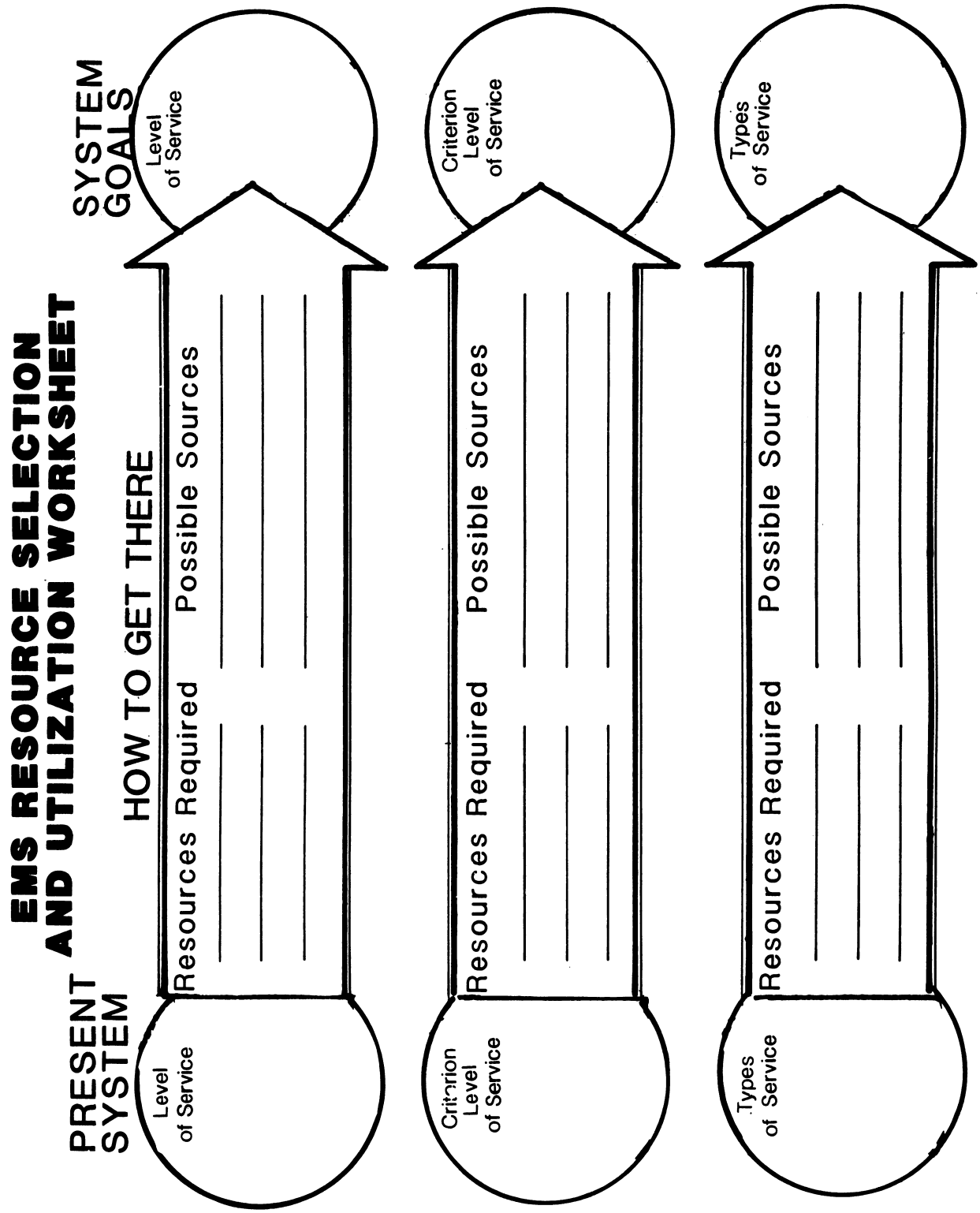
Notes: Information on the process of obtaining grants

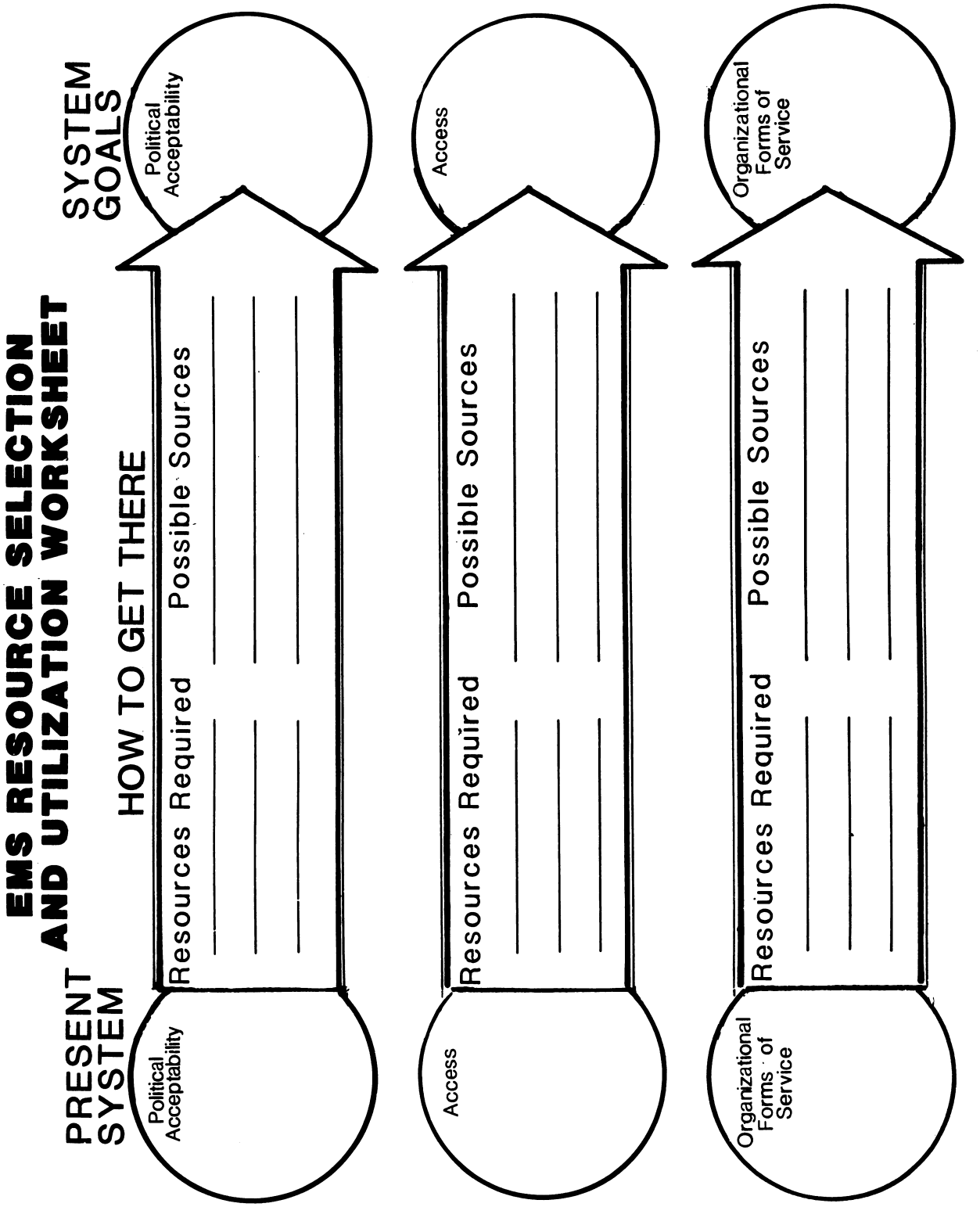
STUDENT ACTIVITIES

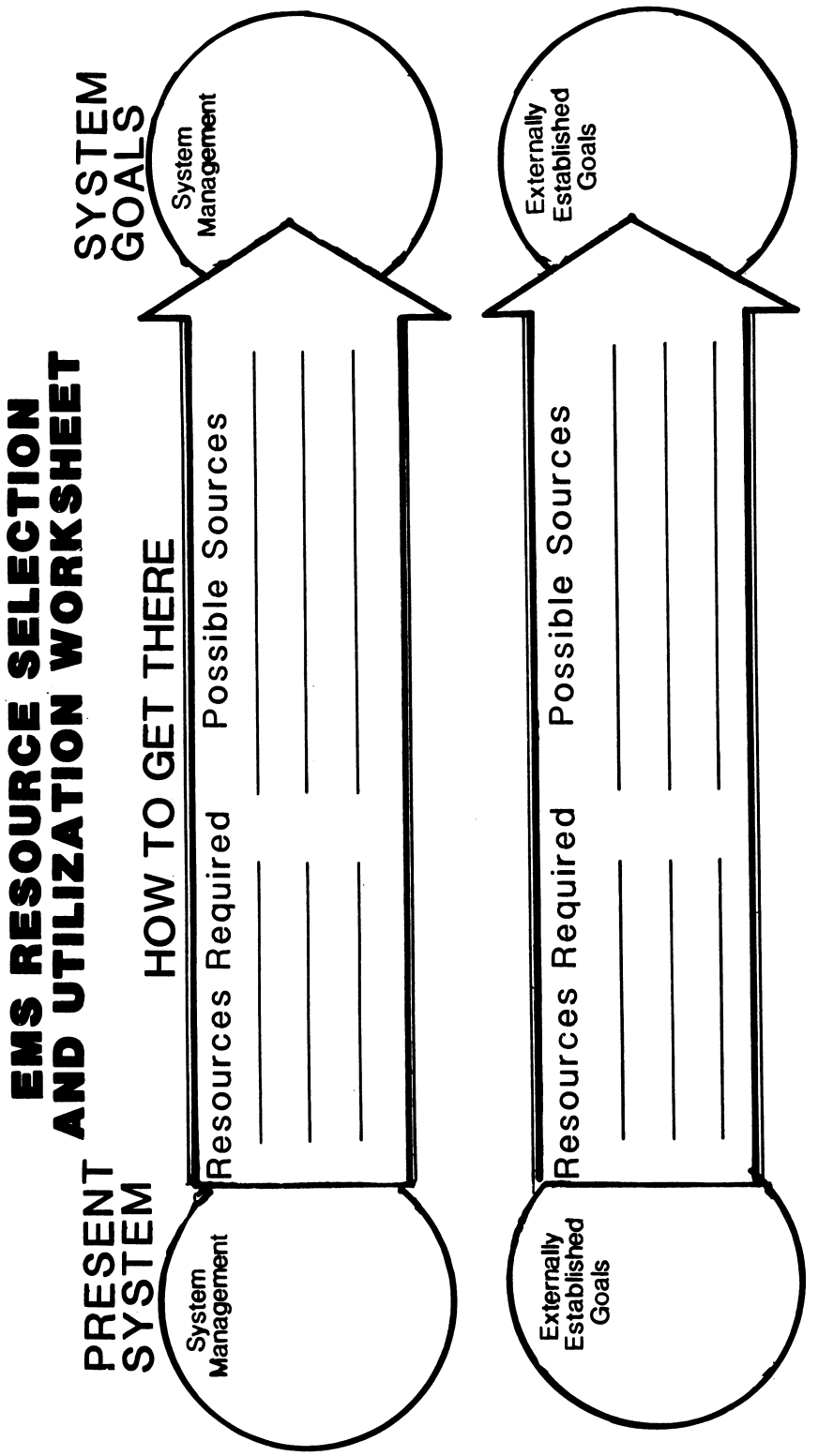
ACTIVITY FIVE--DIRECTIONS

Refering to your EMS Resource Selection and Utilization worksheets, and the goals you listed in the goal formation activity in the previous unit, transcribe your present system descriptions and system goals for each category into the appropriate block of the resource selection worksheets.

Then you will note, under "resources required," assistance that you would like to have--such as technical assistance, funds, training, etc. Take about 10 minutes for this portion of the activity.







TEXT

NATIONAL JOURNALS AND MAGAZINES

AAAM Quarterly Journal, Norman E. McSwain, Jr., MD, scientific editor, Health and Safety Associates, Inc., P.O. Box 222, Morton Grove, IL 60053. Published quarterly by the American Association for Automotive Medicine. Contains information on traffic medicine and transportation safety. Circulation: 750 through paid subscriptions and to dues-paying members, yearly subscription price: $15.00. Does not accept advertising.

Ambulance Journal, J.M. Wilby, editor, 79 Dudsbury ave., Ferndown, Dorset BH22 8DY; 0202/893000. Published monthly by Macmillan Journals Ltd. Official publication for the British organizations: the Ambulance Service Institute, Association of Chief Ambulance Officers, and the National Institute of Ambulance Instructors. Circulation is through paid subscriptions and dues-paying members of the organizations ASI and ACAO. Individual subscription price: UK 7.00 (pounds)/year. Accepts advertising.

Annals of Emergency Medicine, Nancy E. Perkin, managing editor, P.O. Box 61911, Dallas, TX 75062; 214/659-0911. Published monthly by the American College of Emergency Physicians and University Association for Emergency Medicine. Publishes original reports on current topics and a variety of features such as reviews and opinions on clinical emergency medicine and EMS. Circulation: 15,000 through paid subscribers and dues-paying members. Subscription price: $40.00 domestic, $50.00 overseas. Accepts advertising.

The Bulletin of the American College of Surgeons, Dennis M. Connaughton, editor, 55 East Erie St., Chicago, IL 60611; 312/664-4050. Published monthly by the American College of Surgeons. Reports on official college actions and policies and related medical issues, including aspects of EMS. Circulation: 60,000 through dues-paying members of the organization. Available to individuals and organizations nation wide. Does not accept advertising.

Canadian Emergency Services News, Harald Gunderson, editor, Suite 105 Stockmans Centre, 2116-27th Ave. NE, Calgary, Alberta T2E 7A6; 403/230-2155. Published bimonthly by Sage Brush Ventures Ltd. Contains news and photos on emergency medicine and rescue in Canada. Circulation: 4,700 through controlled mailing list and paid subscriptions. Yearly subscription price: $12.00. Accepts advertising.

Emergency (The Journal of Emergency Services), Donna Mann, managing editor, P.O. Box 159, Carlsbad, CA 92008; 714/438-9666. Published monthly by DynaIndustries. Contains information for all levels of emergency care providers including clinical articles, current national news and photographs of responders in action. Circulation: 36,500 through paid subscribers. Yearly subscription price: $17.95. Accepts advertising.

Emergency Health Services Management, Ralph B. D'agostino, Ph.D., Boston City Hospital, 818 Harrison Ave., Boston, Sears 108, MA 02118. To be published quarterly by Haworth Press Inc. Symposium approach to original research to serve administrative management in EMS. Circulation: 1,500 through paid subscriptions. Yearly subscription price: $75.00/libraries; $60.00 other institutions; $48.00/individuals. Accepts advertising.

Emergency Medical Abstracts, 1224 Inverness Dr., Flintridge, CA 91011. Published monthly by Charles B. Slack, Inc. Surveys 500 medical journals monthly and provides a listing of all articles relevant to emergency medicine and prehospital care. Summarizes 40 key articles. Yearly subscription price: $85.00.

Emergency Medical Services (The Journal of Emergency Care and Transportation), Joan Hart, managing editor, 12849 Magnolia Blvd., North Hollywood, CA 91607: 213/980-4184. Published bimonthly with an annual buyers guide by Creative Age Publications. Contains articles and columns with educational and informational material of interest to administrative personnel as well as emergency care providers. Circulation: 40,000 through controlled mailing list and paid subscriptions of $25.00/year. Accepts advertising.

Emergency Medicine, Douglas Wagner, editor, 280 Madison Ave., New York, NY 10016; 212/889-4530. Published twice a month except July, August and December by the Fischer Medical Publications. Contains clinical and educational articles to aid primary care physicians in treating common emergencies in daily practice. Circulation: 124,000 through controlled mailing list and paid subscriptions. Yearly subscription rates: physicians/$25.00; allied health professionals/$27.50. Accepts advertising.

Fire Chief Magazine, William Randleman, editor, 40 E. Huron, Chicago, IL 60611; 312/642-9862. Published monthly by the H. Marvin Ginn Corporation. Contains material to help the fire chief in training, administration and fire-fighting techniques and strategy including a regular department on EMS. Circulation: 31,000 through paid subscriptions, and controlled mailing list. Yearly subscription price: $17.00. Accepts advertising.

Fire Engineering, R.P. Sylvia, editor, 666 Fifth Ave., New York, NY 10103; 212/489-4666. Published monthly by Technical Publishing Company. Provides information and instruciton to fire departments on all aspects of the fire service, including EMS. Circulation: 35,000 through paid subscriptions. Yearly subscription price: $12.95. Accepts advertising.

Firehouse, John Peige, executive editor, 515 Madison Ave., New York, NY 10022; 212/935-4550. Published monthly by the American Firefighting Associates. Contains articles and news of interest to paid and volunteer firefighters including sections on emergency medical services. Circulation: 100,000 through paid subscriptions. Yearly subscription price: $18.00. Accepts advertising.

Fire Service Today, (formerly **Fire Command**) Joyce Keefe, Batterymarch Park, Quincy, MA 02269; 617/328-9290. Published monthly by the National Fire Protection Association. Communicates to fire service management personnel the concepts of fire service management. Also current information on legislative actions affecting fire service. Circulation: 30,000 through paid subscribers. Yearly subscription price: $12.00, NFPA members $10.00. Accepts advertising.

International Fire Chief, Colin Campbell, director of information, International Association of Fire Chiefs, 1329 18th St., NW, Washington, DC 20036; 202/833-3420. Published monthly by the IAFC. Provides information for persons charged with administering fire prevention, protection and suppression efforts, including emergency medical care. Circulation: 8,500 through paid subscriptions and dues paying members of the organization. yearly subscription rate for non-members: $18.00. Accepts advertising.

International Rescuer, Frank A. Dealing, editor, P.O. Box 3001, Baltimore, MD 21229; 301/242-5112. Published quarterly by the International Rescue and Emergency Care Association. Contains association news as well as general features of interest to emergency care personnel. Circulation: 1,500 to dues-paying members of the organization. Yearly subscription price: $25.00 individuals; $50.00 squads; $100.00 associations. Accepts advertising.

Jems (Journal of Emergency Medical Services), Jim Page, editor-in-chief, Keith Griffiths, managing editor, P.O. Box 401, Basking Ridge, NJ 07920; 201/766-7937. Published monthly by Jems Publishing Co. Provides up-to-date news, clinical reviews, original surveys, product information and investigative reports to keep the field responder as well as the administrator current on problems and progress in emergency medicine and rescue. Circulation: 30,000 through paid subscriptions and controlled mailing list. yearly subscription price: $13.40. Accepts advertising.

Jen (Journal of Emergency Nursing), Gail Pisarcik, editor, 11830 Westline Industrial Dr., St. Louis, MO 63141. Published bimonthly by the Emergency Department Nurses Association. Serves the information and communication needs of the emergency nursing profession through clinical articles features and association news. Circulation: 17,000 through paid subscriptions and dues-paying members. Yearly subscription price: individual $15.00; institutions $34.00; students $12.00. Accepts advertising.

Journal of Traffic Medicine — IAATM Newsletter, Lee N. Hames, assistant editor, American Medical Assn., 535 N. Dearborn St., Chicago, IL 60610; 312/751-6000. Published quarterly by the International Association for Accident and Traffic Medicine. Contains objective, statistical material that covers world-wide research related to traffic medicine and accident prevention. Circulation through paid subscriptions and dues-paying members. Yearly subscription price: Swiss Franc 23 or equivalent. Accepts advertising.

The Journal of Trauma, John H. Davis, MD, editor, The University of Vermont, College of Medicine, The Given Building, Burlington, VT 05405; 802/656-2563. Published monthly by Williams and Wilkins. Official journal of the American Association for the Surgery of Trauma — contains clinical articles in the care of traumatized patients. Circulation: 5,300 through paid subscriptions and dues-paying members. Yearly subscription price: $40.00. Accepts advertising.

The Journal of Winter Emergency Care, Betty Kleiner, managing editor, 5 Flintrock Ridge, Simsbury, CT 06070; 203/658-5670. Published twice a year in the fall and spring by the National Ski Patrol System Inc. Provides first aid information for instructors and current clinical information on injuries and situations the patroller may come in contact with. Circulation: 4,000 through controlled mailing list and paid subscriptions of $5.00/year; $7.00/year foreign. Does not accept advertising.

Mine Safety and Health, Sam Stafford, editor, MSHA-Office of Information, 4015 Wilson Blvd. Rm. 1237-A, Ballston Tower #3, Arlington, VA 22203; 703/235-1452. Published bimonthly by the U.S. Department of Labor, Mine Safety and Health Administration. Promotes safety in mining industrie with special emphasis on individual safety in company operations, and keeps industry and government informed on new technology and changing policy. Circulation: 9,000 through controlled mailing list and paid subscribers. Yearly subscription price: $13.00, overseas $16.25. Does not accept advertising.

NATA Journal (Athletic Training), Clinton Thompson, editor, P.O. Drawer 1865, Greenville, NC 27834; 919/752-1725. Published quarterly by the National Athletic Training Association. Contains news and articles relating to the care and prevention and rehabilitation of the injured athlete. Circulation: 10,000 through controlled mailing list and dues-paying members. Yearly subscription price: $15.00. Accepts advertising.

National Patroller, Audrey Adams, editor, 2901 Sheridan Blvd., Denver, CO 80214; 303/237-2737. Published quarterly by the National Ski Patrol System Inc. Disseminates information of interest to ski patrollers including medical first aid, phases of search and rescue, equipment, and news of interest to NSPS Inc. Circulation 24,600 through paid subscribers and dues-paying members. Sent free to ski patrollers; other subscriptions are $5.00/year. Accepts advertising.

National Safety News, Roy Fischer, editor, 444 N. Michigan Ave., Chicago, IL 60611; 312/527-4800. Published monthly by the National Safety Council. Furnishes occupational safety and health specialists with information on trends, procedures, equipment and the thinking of leaders in the field. Circulation: 60,000 through controlled mailing list. Subscription price: $17.00/year. Accepts advertising.

Occupational Health & Safety, Craig Stevens, editor, P.O. Box 7573, Waco, TX 76710; 817/752-6566. Published monthly by the Stevens Publishing Corporation. Provides information for understanding and controlling occupational illness, injury and hazardous exposure. Circulation: 38,000 through controlled mailing list and paid subscribers. Subscription price: $24.00/year. Available to individuals and organizations nationwide. Accepts advertising.

The Physician and Sportsmedicine, Allan J. Ryan, MD, editor, 4530 W. 77th St., Minneapolis, MN 55435; 612/835-3222. Published monthly by McGraw Hill Inc. Contains material which serves the practicing physician's professional and personal interests in the medical aspects of sports. Circulation: 110,000 through controlled mailing lists and subscriptions. Yearly subscription price: $30.00. Accepts advertising.

Response, Lois Clark McCoy, editor-in-chief, Molly Hillson, managing editor, P.O. Box 1026, Solana Beach, CA 92075; 714/481-1128. To be published quarterly by Jems Publishing for the National Association of Search and Rescue. Contains features, departments and reviews aimed at both the field and administrative aspects of search and rescue and disaster management. The official journal of NASAR has a circulation of 10,000 through controlled mailing list and dues-paying members. $25.00 annual membership dues entitles you to **Response** and **Briefings** (NASAR Newsletter). Accepts advertising.

Response, Wayne Jenkins, editor, P.O. Box 46, Lancefield, Australia 3435; 054 291564. Published quarterly by Chevron Publishing, Melbourne. Is the official publication of the Institute of Ambulance Officers (Australia); contains educational articles and news of developments in EMS. Circulation: 4,000 through paid subscriptions and dues-paying members of the organization. Yearly subscription price: $8.00. Accepts advertising.

SCI Digest, Delmar McNeil, distribution manager, Good Samaritan Hospital, 1130 East McDowell Rd., Suite A-6, Phoenix, AZ 85006; 602/257-4222. Published quarterly by the National Spinal Cord Injury Data Research Center. Provides medium to assimilate data and disseminate information on spinal cord injuries. Circulation: 2,000 through paid subscribers. Price: $30.00/year. Does not accept advertising.

Search and Rescue Magazine, Dennis Kelley, editor, P.O. Box 641, Lompoc, CA 93438; 805/733-3986. Published quarterly. Contains technical articles, association news and a forum for discussion of SAR's problems and progress. Circulation: through paid subscribers. Yearly subscription price: $64.00. Accepts advertising.

STAT, Barry Staum, MD, editor-in-chief, 1520 Arizona, Santa Monica, CA 90404; 213/451-0783. Published periodically by Janzen, Johnston & Rockwell, a Medical Corporation. Contains articles on topics of practical value (applied clinical knowledge, methods of efficient practice, and politics of health care) for Southern Californians interested in emergency medicine. Circulation: 3,600 through controlled mailing lists. Available to interested parties nationwide. Does not accept advertising.

Topics in Emergency Medicine, 1600 Research Blvd., Rockville, MD 20850; 301/251-5000, toll free, 800/638-8437. Published quarterly by the Aspen Systems Corporation. Presents in-depth clinical information to update specific areas of emergency medicine. Circulation: 6,000 through paid subscribers. Yearly subscription rate: $39.00. Accepts advertising.

Traffic Safety, Robert Overend, editor, 444 N. Michigan Ave., Chicago, IL 60611; 312/527-4800. Published bimonthly by the National Safety Council. Provides news, statistical information, and responsible opinion on matters relating to traffic safety and accident prevention. Circulation: 17,500 through paid subscribers and dues paying members. Subscription rates — members $11.15/year, nonmembers $13.95/year.

Western Fire Journal, David K. McKnight, editor, 9072 E. Artesia Blvd., Suite 7, Bellflower, CA 90706; 213/866-1664. Published monthly by John Ackerman. Focuses on the specific technical needs of the progressive fire service. Circulation: 5,000 through paid subscriptions. Yearly subscription price: $10.00. Accepts advertising. Free sample copy sent upon request.

NATIONAL NEWSLETTERS

The AAOS EMS Newsletter, Susan Nowicki, editor, 444 N. Michigan Ave., Chicago, IL 60611; 312/822-0970. Published quarterly by the American Academy of Orthopedic Surgeons. Informs members and others on the organization's activities relating to EMS. Circulation: 9,200 through controlled mailing list. Does not accept advertising.

AMD, published quarterly by American Ambulance Association, 1401 21st Street, Suite 300, Sacramento, CA 95814; 916/448-5223. Provides news of the ambulance industry. Circulation: 2,500 through controlled mailing list and dues-paying members. Accepts advertising. Available to interested parties nationwide.

Andrew Seybold's Report on ... Mobile Emergency Communications, P.O. Box 208, Redondo Beach, CA 90277; 213/370-0543. Published monthly by Emergency Communications Services, Inc. Provides the communications community in the Public Safety Radio service with a forum of technology, FCC happenings, industry information, systems design concepts, and equipment reviews. Circulation: 500. Yearly subscription rate: $72.00. Does not accept advertising.

Cardiac Alert!, Toni Weiss, medical editor, 8 Bluestone Terrace, Morristown, NJ 07960; 201/538-7938. Published monthly by Health Communications, Inc. Provides information on what is new in cardiology and educates the public about their hearts, heart disease, diet and exercise. Circulation: 4,000 through paid subscriptions of $24.00/year. Does not accept advertising.

The Civil Air Patrol News, Frank Lowry, editor, Hq. CAP-USAF/PAI, Maxwell AFB, AL 36112. Provides information on CAP activities, including search and rescue and disaster missions. Circulation: 60,000 through paid subscriptions and dues-paying members of the organization. Yearly subscription price: $2.00. Does not accept advertising.

Digest of Emergency Medical Care, Jerome R. Hoffman, editor, P.O. Box 2160, Van Nuys, CA 91405; 213/873-4399. Published monthly by P.M. Inc. Covers current topics of interest to emergency physicians with abstracts of current literature and articles. Yearly subscription price: $38.00. Does not accept advertising.

The Dive Rescue Journal, 1449 Riverside Dr., Fort Collins, CO 80524. Published bimonthly by the International Association of Dive Rescue Specialists. Provides information regarding rescue and recovery planning for water accidents, and related issues. Circulation: 5,000 through controlled mailing list, paid subscriptions and dues-paying members. Yearly subscription price: $20.00. Accepts advertising.

Emergency Communicator, to be published quarterly by Professional Emergency Communicators, 30 Bay Street, Suite 204, Staten Island, NY 10301; 212/499-3163. Serves as a clearing house of information for all emergency communicators. Distributed to dues-paying members. Accepts advertising.

Emergency Department News, Harry Walker, editor, 404 Park Ave. South, New York, NY; 212/532-9400. Published monthly by Steven K. Herlitz, Inc. Provides news of emergency medicine including clinical disaster handling, research, professional organizations and government measures affecting EMS. Circulation: 22,000 through controlled mailing list. Yearly subscription price: $18.00. Available to interested parties nationwide. Accepts advertising.

Emergency Nurses Legal Bulletin, James E. George, MD, JD, editor, P.O. Box 293, Westville, NJ 08903. Published quarterly by Med/Law Inc. Provides information on medical and legal subjects of importance for emergency nurses. Circulation 5,000 through paid subscribers and controlled mailing list. Yearly subscription price: $20.00. Accepts advertising.

Emergency Physician Legal Bulletin, James E. George, MD, JD, editor, P.O. Box 293, Westville, NJ 08903. Published quarterly by Med/Law Publishers Inc. Covers a variety of medical and legal subjects of importance for physicians. Circulation: 5,000 through controlled mailing list and paid subscribers. Yearly subscription rate: $25.00. Accepts advertising.

EMS Communicator, Stephanie Ladewig, editor, P.O. Box 357, Wilton, CT 06897; 203/762-3911. Published quarterly by Emergency Care Information Center. Contains articles of interest on a national and international level for those involved in the emergency care field. Circulation through controlled mailing list, paid subscribers and dues-paying members. Subscription price: $12.00/year. Does not accept advertising.

The EMS Repeater, Karl A. Lutz, managing editor, 36 South Park Ave. #205, Winter Garden, FL 32787; 305/877-2265. Information and idea exchange for all interested groups throughout the USA. Editorial goals are, but not limited to, innovations in EMS and local issues affecting the EMS system.

Published bimonthly by Mr. Lutz. Circulation: 100 through controlled mailing list. Does not accept advertising.

The EMT Legal Bulletin, James E. George, MD, JD, editor, P.O. Box 293, Westville, NJ 08903. Published quarterly by Med/Law Publishers Inc. Covers variety of legal issues as they relate to case histories in prehospital medicine. Circulation: 5,000 through paid subscriptions and controlled mailing lists; $15/year. Accepts advertising.

Fire Control Digest, Brian Thomas, editor, 7620 Little River Turnpike, Annandale, VA 22003; 703/941-6600. Published monthly by the Washington Fire News Service. Contains up-to-date news articles on industry projects, grants, conferences and legal issues — including section on EMS highlights. Circulation: 3,000 through controlled mailing list and paid subscriptions. Individual subscription price: $60.00/year. Does not accept advertising.

Fire Management Review, Jerry Hooper, editor, 1140 Connecticut Ave. NW, Washington, DC 20036; 202/828-3646. Published periodically by the International City Management Association (U.S. Fire Administration). Shares recent research with an emphasis on utilization to build management skills of local government administrators and fire service managers. Circulation: 6,200 through controlled mailing list. Available to interested individuals and organizations nationwide. Does not accept advertising.

Fire Service Resource Management Bulletin, Jim Smalley, 202/287-0794. Sponsored by the Federal Emergency Management Agency, and published 3 or 4 times a year depending on need. Directed to fire service managers with dual roles — EMS and Fire Protection administration. Circulation: 2500 through controlled mailing list. Available at no cost to all interested parties. Does not accept advertising.

The Good Neighbor, Sally Stewart, editor, 17th and D Streets NW, Washington, DC 20006; 202/737-8300. Published bimonthly by the American Red Cross. Contains news and views on volunteer service in emergency situations. Circulation: 80,000 through controlled mailing list. Available to interested volunteers nationwide. Does not accept advertising.

The Highway Loss Reduction Status Report, Paul C. Hood, editor, Watergate 600, Washington, DC 20037; 202/333-0770. Published twice a month by the Insurance Institute for Highway Safety. Contains material relating to the reduction of losses — deaths, injuries, and property damages — resulting from crashes on the nation's highways. Circulation: 15,000 through controlled mailing list. Available to interested parties nationwide. Does not accept advertising.

International Society on Disaster Medicine, 10 xhemin de Surville 1213 Petit-Lancy/Geneva, Switzerland; telephone: (22) 93 44 33. Published quarterly in English by the Secretariat of the International Society on Disaster Medicine. Contains articles on technical and organizational developments, and bibliographical references on rescue, first aid, fire fighting and survival in case of disaster. Circulation: 500 through dues-paying members. Accepts advertising.

Journal of Civil Defense, P.O. Box 910, Starke, FL 32091; 904/964-5397. Published bimonthly by The American Civil Defense Association (TACDA). Keeps public and officials informed of conditions in U.S. Civil Defense, including material about emerency medicine triage. Circulation: 2,500 to paid subscribers and dues-paying members. Yearly subscription price: $12.00. Accepts advertising.

Medic Alert Newsletter, Dennis Brennan, editor, P.O. Box 1009, Turlock, CA 95381; 209/668-3333. Published bimonthly by the Medic Alert Foundation. Maintains a line of communication between over 200 sponsoring organizations and gives news of the volunteers and programs involved with Medic Ale Circulation: 15,000 through controlled mailing list. Available to interested parties nationwide. Does not accept advertising.

Medical 911, P.O. Box 457, Wilton, Connecticut 06897; 203/762-3911. Published bimonthly by the Emergency Care Information Center. Provides a guide to resources needed by EMS professionals in the performance of their job. Includes information on agencies and organizations, instructional materials (films, models, training manikins, simulated injury kits, teaching programs), books, reports, and an index to the literature. Circulation is through paid subscriptions of $99.00/year. Does not accept advertising.

Model Systems' SCI News Briefs, 1130 E. McDowell Road, Suite A-6, Phoenix, AZ 85006; 602/257-4222. Published bimonthly by National Spinal Cord Injury Data Research Center, Good Samaritan Hospital, Phoenix, AZ 85003. Disseminates information about Health Care Professionals/Patient Activities and programs developed in the Regional Model Systems' SCI Centers. Circulation: 1,250 through controlled mailing lists. Available nationwide to those interested. Does not accept advertising.

Mobile Times, Julie Perrin, assistant editor, P.O. Box 5400 TA, Denver, CO 80217. Published monthly by Titsch Publishing Inc. Covers issues of concern and interest to users of mobile radio systems. Circulation: 20,346 through controlled mailing list and paid subscribers. Accepts advertising. Available to interested parties nationwide.

Mutual Aid, The EMS Management Newsletter, Joseph V. Saitta, editor, P.O. Box 102, Sterling, VA 22170; 703/450-5813. Developed as a forum for EMS managers and to facilitate the sharing of information resources in EMS management. Published quarterly (bimonthly starting July 1982) by EMS Management Institute, Inc. Circulation: 1,000 by paid subscription. Yearly subscription rate: $8.50. Accepts advertising.

NASAR Briefings, Molly Hillson, managing editor, P.O. Box 1026, Solana Beach, CA 92075; 714/481-1128. Published quarterly by Jems Publishing Co. for the National Association for Search and Rescue. Provides information on continuing education and association news to members of NASAR. Circulation: 2,500 through controlled mailing list and dues-paying members of the organization. Accepts advertising.

Occupational Health & Safety Week, P.O. Box 7573, Waco, TX 76710. Published weekly by Stevens Publishing Corporation. An international journal dedicated to understanding and controlling occupational illness and hazardous exposure. Circulation: 38,000 through controlled mailing list and paid subscribers. Yearly subscription rate: $24.00. Available to interested parties nationwide. Accepts advertising.

Outreach, Linda A. Burns, director, 840 N. Lake Shore Drive, Chicago, IL 60611; 312/280-6456. Published bimonthly by the Division of Ambulatory Care, American Hospital Association. Promotes communication among administrators of hospital-sponsored ambulatory care programs, EMS, health maintenance organizations, and home care and hospice programs. Features information on legislation and regulations, opportunities for grants, educational programs and health policy issues. Circulation: 14,000 through paid subscribers and dues-paying members. Does not accept advertising; is available to people outside the organization.

Registry, Teri Tatman, Editor, P.O. Box 29233, Columbus, OH 43229-0233; 614/488-4484. Published March, July and December by the National Registry of EMTs. Disseminates news of interest to nationally registered EMTs with particular emphasis on registry activities. Circulation: 65,000 through controlled mailing list. Available to interested parties nationwide. Does not accept advertising.

Rescue Review, Sgt. Jim Katzaman, editor, MAC/PAL, Scott AFB, IL 62225; 618/256-4615. Published monthly by the Aerospace Rescue and Recovery Service — Military Airlift Command. Contains information on rescue and recovery services worldwide, including reviews of major rescues and news of events and developments that affect the field. Circulation: 1,700 through controlled mailing list. Available to interested individuals and organizations nationwide. Does not accept advertising.

Rotornews, Sarah Hannegan, editor, 1110 Vermont Ave. N.W., Suite 430, Washington, DC 20005; 202/466-2420. Published monthly and biweekly by Helicopter Association International. Contains information on safety, legislation, operator and manufacturer information on HAI and the helicopter industry including helicopter applications in emergency situations. Circulation: 3,300 through controlled mailing list and dues-paying members of the organization. Available on press and selected organizations only. Does not accept advertising.

Search and Rescue, Joye Crouch, editor, P.O. Box 391, Morgan, UT 84050; 801/829-6372. Published monthly by the National Jeep Search and Rescue Association. Provides members with association's activities, training updates and news of rescue missions. Circulation: 2,300 through paid subscriptions and dues-paying members of the organization. Yearly subscription price: $3.00. Accepts advertising.

Technology for EMS, 3200 Butler Pike, Pymouth Meeting, PA 19462; 215/825-6000. Published monthly by ECRI (formerly Emergency Care Research Institute). Informs EMS personnel of current issues in technology as well as reported problems, hazards, recalls and evaluations involving equipment or devices used in emergency medicine. This is a new publication for paid subscribers. Does not accept advertising. Yearly subscription price: $70.00.

Traffic Safety Newsletter, Dot McKinney, editor, Rm 5117 Nassif Bldg. NTS-23, NHTSA, Washington, DC 20590; 202/426-0085. Published 10 times per year by Traffic Safety Programs, National Highway Traffic Safety Administration. Provides persons and organizations closely allied with the traffic safety field with knowledge on ideas, programs and projects designed to reduce crashes, injuries and deaths on the highways. Circulation: 2500 through controlled mailing list. Does not accept advertising.

Traumagram, 875 North Michigan Avenue, Chicago, IL 60611, 312/649-1810. Published quarterly by the American Trauma Society. Reports progress of the Society's activities and programs; prints articles concerning issues related to trauma. Circulation: 4,500 through controlled mailing list; distributed to contributors to the American Trauma Society. Does not accept advertising.

The Washington Scene, Colin A. Campbell, director of information, 1329 18th St. NW, Washington, DC 20036; 202/833-3420. Published weekly by the International Assn. of Fire Chiefs. Reports on legislative actions, government reports concerning fire and rescue and emergency medical services. Circulation: 400 through paid subscriptions and dues-paying members. Yearly subscription price: members — $9.75; others — $14.75. Does not accept advertising.

REGIONAL NEWSLETTERS

ALABAMA

BREMSS, Birmingham Regional Emergency Medical Services System, Sherri Mills, editor, 912 S. 18th St., Birmingham, AL 35205; 205/934-2595. Published quarterly by BREMSS. Circulation: 4,000 through controlled list. Available to interested parties nationwide. Does not accept advertising.

Emergency Dispatch, 836 Washington Avenue, Montgomery, Alabama 36106. Published quarterly by the Southwest Alabama Emergency Medical Services Council. Circulation: 3,000. Available to interested individuals/organizations nationwide. Does not accept advertising.

The EMS Region Report, Steven Hall, administrator, NAEMS, P.O. Box 2104, 4th Floor, City Hall, Decatur, AL 35602; 205/353-3800. Published quarterly by North Alabama EMS, Inc. Circulation: 3,500 through controlled mailing list. Available nationwide to those interested. Does not accept advertising.

Southwest Alabama EMS News, P.O. Box 911, Grove Hill, AL 36451; 205/275-3088. Published bimonthly by Southwest Alabama Emergency Medical Services System, Inc. Circulation: 2,000 through controlled mailing list. Does not accept advertising. Available nationwide to those interested.

West Alabama Emergency Medical Services, Phillip K. Bobo, MD, director, P.O. Box 911, University, AL 35486; 205/345-0938. Published quarterly by West Alabama EMS, Inc. Circulation: 3,500 through controlled mailing list. Available to interested individuals and organizations nationwide. Does not accept advertising.

ALASKA

Medivac, EMS, Box 528, Bethel, AK 99559. Published approximately every two months by EMS, Yukon-Kuskokwim Health Corp. Circulation: 500 through controlled mailing list. Available nationwide to those interested. Accepts advertising.

Response-EMS Alaska, Gloria Houston Way, editor, EMS Section, D.P.H., Pouch H-06C, Juneau, Alaska, 99811; 907/465-3027. Published bimonthly by the Alaska EMS section, Division of Public Health. Circulation: 2,800 through controlled mailing list. Available to interested individuals and organizations nationwide. Does not accept advertising.

ARIZONA

Phoenix Fireworks, Teri Nieschulz, editor, 620 W. Washington, Room 465, Phoenix, AZ 85003; 602/256-3199. Published monthly by the Phoenix Fire Department. Circulation: 1,500 through controlled mailing list. Available to interested individuals and organizations nationwide. Does not accept advertising.

CALIFORNIA

EMS Response Times, 630 Azalea, Redding, CA 96002. Published quarterly by Northern California Emergency Medical Care Council. Distributed through controlled mailing list. Available nationwide to those interested. Does not accept advertising.

Flight Log, Nina Merrill, director, 2801 Atlantic Ave., P.O. Box 1428, Long Beach, CA 90801. Published quarterly by Life Flight Southern California, Memorial Hospital Medical Center, Daniel Freeman Hospital. Circulation: 7,500 through controlled mailing list. Available nationwide to those interested. Does not accept advertising.

Paramedic News, Ginger Murphy Ochs, editor, EMS Training Office, 225 Dickinson H216, San Diego, CA 92013; 714/294-6449. Published quarterly by the EMS Training Office. Circulation: 400 through controlled mailing list. Does not accept advertising.

Paramedic Pipeline, 611 S. Catalina Ave., Suite 311, Los Angeles, CA 90005; 213/386-0263. Sponsored monthly by United Paramedics of Los Angeles (published by Magnum III). Circulation: 4,000 through controlled mailing list and paid subscribers. Yearly subscription rate: $10.00. The Pipeline is available as a courtesy to those working in EMS and related fields. Accepts advertising.

The Siren, Robert L. Phillips, editor, 1401 21st Street, Suite #300, Sacramento, CA 95814; 916/443-5959. Published bimonthly by the California Ambulance Assn. Circulation: 2,000 through controlled mailing lists, paid subscriptions, and dues-paying members. Yearly subscription price: $12.00. Accepts advertising.

COLORADO

Colorado Search and Rescue Board Bulletin, 2415 East Maplewood Avenue, Littleton, CO 80121; 303/794-2304. Published monthly by Colorado Search and Rescue Board. Circulation: 500 through controlled mailing list and dues-paying members of organization. Does not accept advertising.

DELAWARE

The Delaware Provider, Mary Grampp Brown, editor, EMS Office, Division of Public Health, Jesse Cooper Building, Dover, DE 19901; AC 302/736-4710. Published quarterly by the Delaware Division of Public Health. Circulation: 500 through controlled mailing list. Available to interested individuals and organizations nationwide. Does not accept advertising.

FLORIDA

Responder, Jef Walker, editor, 1000 N. Orlando Ave., Winter Park, FL 32789; 305/644-6911. Published quarterly by the East Central Florida Regional EMS Council. Circulation: 1,750 through controlled mailing list. Available to interested individuals and organizations nationwide. Accepts advertising.

GEORGIA

EMS News, Emergency Health Section, 618 Ponce De Leon Ave., Atlanta, GA 30380; 404/894-5170. Published monthly by the Georgia Division of Public Health, Emergency Health Section. Circulation: 1,200 through controlled mailing list. Available to interested parties nationwide. Does not accept advertising.

ILLINOIS

EMS Newsletter, Richard Sheehan, Public Relations Department, Ingalls Memorial Hospital, One Ingalls Drive, Harvey, IL 60426; 312/333-2300. Published quarterly by the South Cook Emergency Medical Service System. Circulation: 1,300 through controlled mailing list. Available to interested parties nationwide. Does not accept advertising.

The Gong, H. V. "Chris" Christiansen, executive officer, P.O. Box 294, South Beloit, IL 61080; 608/365-6515. Published quarterly by the Illinois Fire Chief's Association. Circulation: 850 through controlled mailing list and dues-paying members. Yearly subscription rate: $30.00 by membership (active and associate). Accepts advertising.

INDIANA

EMS Communicator, John Diener, communications director, 315 State Office Building, Indianapolis, IN 46204; 317/232-3980. Published quarterly by the Indiana EMS Commission. Circulation: 16,000 through controlled mailing list. Available to interested individuals and organizations nationwide. Does not accept advertising.

Medic Notes, Ellen Scharmach, Prehospital Education Coordinator, Staff Development, Memorial Hospital, 615 N. Michigan St., South Bend, IN 46601; 219/234-9041. Published monthly by Memorial Hospital of South Bend, IN. Circulation: 2,000 through controlled mailing list. Available nationwide to those interested. Does not accept advertising.

Northeastern Indiana EMS Provider, Terrance P. McCaffrey, editor, 3024 Fairfield Ave., Fort Wayne, IN 46807; 219/458-2197. Published tri-annually by Northeastern Indiana EMS, Inc. Regional Coordination Center. Circulation: 1,400 through controlled mailing list. Available nationwide to those interested.

KANSAS

KEMTA Newsletter, Mary Ann Holdeman, editor, Box 1506, Emporia, KA 66801; 316/343-2854. Published bimonthly by the Kansas Emergency Medical Technicians Association. Circulation: 1318 through controlled mailing lists, paid subscribers and dues-paying members. Yearly subscription price: $10.00 for non-members. Complimentary exchanges available with other organizations. Accepts advertising.

LOUISIANA

A.L.E.R.T., Southwest Louisiana EMS Council, 827 Pujo, Lake Charles, LA 70601. Published monthly by the Southwest Louisiana Emergency Medical Services Council, Inc. Informs emergency care personnel and the general public of EMS activities in Southwest Louisiana. Circulation: 600 through controlled mailing list. Available to interested individuals/organizations nationwide. Does not accept advertising.

MAINE

Maine EMS News, Robert Tredwell, Director of Human Services, 295 Water St., Augusta, ME 04330; 207/289-3953. Published bimonthly by the EMS Program of the Maine Department of Human Services. Circulation: 3,000 through controlled mailing list. Available to interested individuals and organizations nationwide. Does not accept advertising.

MARYLAND

Maryland EMS News, Beverly Sopp, editor, 22 South Greene St., Baltimore, MD 21201; 301/528-3248. Published quarterly by the Maryland Institute for Emergency Medical Services Systems. Circulation: 18,000 through controlled mailing list. Available to interested individuals and organizations nationwide. Does not accept advertising.

Maryland Rescue Journal, Charles N. Perry, editor, P.O. Box 3052, Baltimore, MD 21229; 301/242-5112. Published quarterly by Maryland Rescue Journal, Inc. Circulation: 1,500 through controlled mailing lists and subscriptions. Available free to rescue squads and organizations nationwide. Individual subscription: $6.00/two years. Accepts advertising.

MASSACHUSETTS

Central Massachusetts EMS News, Edward McNamara, Executive Director, 419 Belmont Street, Worcester, MA 01605; 617/798-0755. Published monthly by Central Massachusetts EMS, Inc Circulation: 2,500 through controlled mailing list. Does not accept advertising.

Massachusetts EMT, Jeff Harris, editor, P.O. Box 423, Newton Highlands, MA 02161. Published monthly by the Massachusetts Assn. of EMTs. Circulation: 3,050 through controlled mailing list and dues-paying members. Accepts advertising.

Merrimack Valley Emergency Medical Services Newsletter, 1 General Street, Lawrence, MA 01842; 617/682-0143. Published bimonthly by Merrimack Valley EMS Corp. Circulation: 500 through controlled mailing list. Available nationwide to those interested. Does not accept advertising.

MICHIGAN

Code 1000, Phil Mitchell, editor, 17340 John R, Detroit, MI 48203; 313/867-4474. Published bimonthly by the Emergency Mobile Medical Technicians and Trainees Association of Detroit. Circulation: 600 through controlled mailing list, and is available to interested individuals and organizations nationwide. Does accept advertising.

EMS Insight, Christine Hackworth, editor, Southwest Michigan Systems, Inc., P.O. Box 829, Kalamazoo, MI 49005; 616/385-2806. Published bimonthly by Southwest Michigan Systems, Inc. Circulation: 2,000 through controlled mailing list. Available to interested parties nationwide. Does not accept advertising.

EMS Key, 806 W. Sixth Ave., Flint, Michigan 48503; 313/238-9422. Published bimonthly by Region V EMS Council. Circulation through controlled mailing list. Available nationwide to interested individuals/organizations. Does not accept advertising.

EMS News, 425 Fisher Street, Marquette, MI 49855; 906/228-4182. Published monthly by Upper Peninsula EMS Corporation. Circulation: 450 through controlled mailing list. Does not accept advertising. Available nationwide to those interested.

EMS Newsletter, John Hubinger, editor, Box 30035, Lansing, MI 48909; 517/373-1406. Published semi-annually by the Michigan Dept. of Public Health. Circulation: 12,000 through controlled mailing list. Available to interested parties nationwide. Does not accept advertising.

EMS On Target, 806 W. Sixth Ave., Flint, MI 48503; 313/238-9422. Published monthly by Region V EMS Council. Circulation: 1,000 through controlled mailing list. Available to those interested nationwide. Does not accept advertising.

The Michigan EMT, Robert Farrell, editor, P.O. Box 9562, Wyoming, MI 49509; 616/531-7357. Published bimonthly by the Michigan Association of EMTs. Circulation: 900 to dues-paying members. Available to those interested nationwide. Accepts advertising.

MINNESOTA

EMS Access, Pat Patterson, editor, 717 Delaware St. SE, Minneapolis, MN 55440 612/296-5283. Published bimonthly by EMS Section, Minnesota Department of Health. Circulation: 2,300 through controlled mailing list. Available to interested individuals and organizations nationwide. Does not accept advertising.

Minnesota Association of EMTs Newsletter, Mart Gallagher, Route 1, Box 94, Waverly, MN 55390-9737. Published quarterly by the Minnesota Association of EMTs. Circulation: 1,100 to dues-paying members. Available nationwide to those interested. Accepts advertising.

Voice of MRFAA, John Rukavina, editor, 1836 W. Shryer Ave., Roseville, MN 55113; 612/631-0514. Published monthly by the Minnesota Rescue and First Aid Association. Circulation: 900 (paid subscribers and dues-paying members). Yearly subscription rate: $10.00. Available to subscribers or through exchange. Does not accept advertising.

MISSISSIPPI

EMS Informer, Wade Spruill, Jr., editor, P.O. Box 1700, Jackson, MS 39205; 601/982-6608. Published quarterly by the EMS Division of the Mississippi State Board of Health. Circulation: 3,500 through controlled mailing list. Available to interested parties nationwide. Does not accept advertising.

North Mississippi EMS News, Barbara Criswell, editor, Emergency Operations Center, 116 North Main, Pontotoc, MS 38863; 601/489-2006. Published quarterly by the North Mississippi EMS Authority. Circulation: 2,000 through controlled mailing list. Available to interested parties nationwide. Does not accept advertising.

MISSOURI

Code 3, Larry Dahl, executive director, Central Missouri Emergency Services, Inc., 705 Jefferson, Jefferson City, MO 65101; 314/635-0236. Published bimonthly by Central Missouri EMS, Inc. Circulation: 2,000 through controlled distribution list and handouts. Available to interested individuals/organizations nationwide. Accepts advertising.

Missouri Emergency Medical Services, Nancy Hudson, editor, P.O. Box 570, Jefferson City, MO 65102; 314/751-2713. Published bimonthly by the Missouri Bureau of EMS. Circulation: 800 through controlled mailing list. Available to interested individuals and organizations nationwide. Does not accept advertising.

MONTANA

Vitals, John W. Shorthill, editor, P.O. Box 687, Forsyth, MT 59327; 406/356-7968. Published quarterly by the Montana EMS Association. Circulation: 4,000 through dues-paying members. Available to interested organizations and individuals nationwide. Advertising available through sponsorship.

NEBRASKA

Information Digest, 301 Centennial Mall South, Box 95007, Lincoln, NE 68509; 402/471-2158. Published monthly by the Nebraska Department of Health, Division of EMS. Provides information to Nebraska's ambulance attendents concerning emergency medical service and related issues. Circulation: 600 through controlled mailing lists. Available to interested individuals and organizations nationwide. Does not accept advertising.

NEW HAMPSHIRE

EMS Update, North County EMS Project, Dept. of Community and Family Medicine, Dartmouth Medical School, Hanover, NH 03755; 603/646-3481. Published monthly by the North County EMS Project. Circulation: 500 through controlled mailing list and paid subscribers. Yearly subscription rate: $3.00. Available nationwide to those interested. Does not accept advertising.

NEW JERSEY

The New Jersey Responder, P.O. Box 69, Kenilworth, NJ 07033 (c/o Bob Freeman); 201/687-1900, ext. 3365. Published bimonthly by the EMT and Paramedic Society of New Jersey. Circulation: 1,000 to dues-paying members. Available nationwide to those interested. Accepts advertising.

NEW YORK

The Blanket, Kitty Rooney-Coch, editor, P.O. Box 311, Tappan, NY 10983; 914/359-8082. Published quarterly by the New York State Volunteer Ambulance and First Aid Association Inc. Circulation: 2,000 through paid subscriptions and dues-paying members. Non-member subscriptions: $2.00/year. Accepts advertising.

EMS Dispatch, CNYEMS Program, 290 Elwood Davis Rd., Suite 211, Liverpool, NY 13088-6188; 315/451-3001. Published monthly by Central New York EMS Program. Circulation: 3,000 through controlled mailing list. Available to interested parties nationwide. Does not accept advertising.

Emergency Services N.Y., Robert Elling, editor, Suite 803, Hawthorne, Crescent Village, Clifton Park, NY 12065; 518/371-9051. Published quarterly by Code Three Publications, Inc. to promote interaction of New York State's emergency services. Circulation: 5,000 through controlled mailing list. Yearly subscription rate: $8.00. Available nationwide to those interested. Accepts advertising.

Standby, New York EMS, Ellen Weiman, editor, 55-30 58th St., Maspeth, NY 11378; 212/326-0600, ext. 257. Published monthly by New York City EMS. Circulation: 3,000 through controlled mailing lists. Available to interested individuals and organizations nationwide. Does not accept advertising.

Westchester County EMS Newsletter, A. Wallace Owen, editor, Westchester EMS Council, Suite 2042, Macy Pavilion East, Valhalla, NY 10595; 914/347-4968. Published six times a year by the Westchester County EMS Council, Inc. Circulation: 1,300 through controlled mailing list. Complimentary exchanges with other EMS publications plus key EMS individuals. Does not accept advertising.

NORTH CAROLINA

EMS News, Stephen A. Acai, Jr., editor, Office of Emergency Medical Services, P.O. Box 12200, Raleigh, NC 27605; 919/733-2285. Published bimonthly by North Carolina Department of Human Resources, Division of Facility Services, Office of EMS. Circulation: 4,000 through controlled mailing list. Available to those interested nationwide. Does not accept advertising.

North Carolina Emergency News, Graham Johnson, editor, 115 Texas St., Elkin, NC 28621; 804/644-2722. Published monthly. Circulation: 4,000 through controlled mailing list. Available to interested parties nationwide. Accepts advertising.

North Carolina Rescue News, David C. Bossard, editor, North Carolina Rescue News, 9 Laurel Ave., Asheville, NC 28804; 704/258-1100. Published quarterly by the NC State Association of Rescue Squads, Inc. Circulation: 4,000 through controlled mailing list and dues-paying members. Subscription price: $6.00/year for non-NCARS members. Available to interested parties nationwide. Accepts advertising.

NORTH DAKOTA

The Response Time, Evelyn Beasch, editor, Lisbon, ND 58054; 701/683-5946. Published quarterly by the North Dakota Association of EMT/ECT. Circulation: 1,000 through dues-paying members of the organization. Complimentary subscriptions are available to selected organizations. Accepts advertising.

OHIO

Echo, 2174 Kelley Lane, Suite 2, Newark, OH 43055; 614/366-4303. Published by the Ohio Association of Emergency Medical Services quarterly. Circulation: 1500 to dues-paying members. Available on a limited basis to interested parties. Accepts advertising.

OREGON

Oregon Trauma Newsletter, Joseph B. Vander Veer, Jr., MD, editor, 19365 S.W. 65th, Suite 200, Tualatin, Oregon 97062; 503/638-2645. Published six times per year by Providence Medical Center, Portland, OR, American College of Surgeons (OR Chapter), American College Emergency Physician, (OR Chapter). Keeps readership abreast of developments in trauma, including periodic topic reviews. Circulation: 1,000 through controlled mailing list, paid subscribers, and dues-paying members. Yearly subscription rate: $10.00. Does not accept advertising.

PENNSYLVANIA

Emergency Medical Services Dispatch, Karen H. Enress, director of public information, Emergency Health Services Federation, 3514 Trindle Rd., Camp Hill, PA 17011; 717/763-0730. Published bimonthly by the Emergency Health Services Federation of South Central Pennsylvania. Circulation: 3,600 through controlled mailing list. Available nationwide to interested parties. Accepts advertising.

EMS Monitor, William C. Seigel, EMS information/education analyst, Timberhaven, RD 1, Lewisburg, PA 17837; 717/524-4491. Published quarterly by SEDA, Council of Governments. Circulation: 1,200 through controlled mailing list. Available to interested individuals/organizations nationwide. Does not accept advertising.

EMSI Newsletter, Marylou Green, editor, 3600 Forbes Ave., Pittsburgh, PA 15213; 412/687-7373. Published quarterly by the Emergency Medical Services Institute for 12-county region of southwestern Pennsylvania. Circulation: 2,500 through controlled mailing list. Available to interested parties nationwide. Accepts advertising.

Pennsylvania Emergency Health Services Council Newsletter, Joel Grottenthaler, editor, P.O. Box 608, Camp Hill, PA 17011; 717/763-7053. Published periodically by the Pennsylvania Emergency Health Services Council. Circulation: 8,000 through controlled mailing list. Available to interested parties nationwide. Does not accept advertising.

The Pittsburgh Paramedic, Roy E. Cox, Jr., editor, P.O. Box 10248, Pittsburgh, PA 15232; 412/521-7339. Published bimonthly by the Fraternal Association of Professional Paramedics of Pittsburgh. Circulation: 400 through paid subscribers and dues-paying members. Yearly subscription price: $3.50. Available to interested parties nationwide. Accepts advertising.

TENNESSEE

EMS Scanner, Division of EMS, R.S. Gass Building-2S, Nashville, TN 37216. Scheduled to begin publication on January 1, 1982. Sponsored by the Tennessee Division of EMS. Published quarterly.

TEXAS

Network News, Gretchen Weis, editor, Hermann Hospital, 1203 Ross Sterling Ave., Houston, TX 77030; 713/797-4100. Published quarterly by Hermann Hospital to cover activities of Lifeline, Lifeflight, LIFE, and LIFE-LD, lorig distance medical service transport. Circulation: 3,000 through controlled mailing list. Available to interested parties nationwide. Does not accept advertising.

Signal 1-7, William Jernigan, editor, Dallas Fire Department, City Hall, Dallas, TX 75201; 214/670-5214. Published by the Dallas Fire Department. Circulation: 1,000 through controlled mailing list. Available to interested parties on a limited basis. Does not accept advertising.

VIRGINIA

Emphasis, Helen Hood, editor, 352 Church Ave., SW, Roanoke, VA 24016; 703/982-2491. Published 10 times a year by the Roanoke (Virginia) Valley Chapter, Appalachian Regional Blood Services, and the Appalachian Division of the American Red Cross. Contains local and national information relating to the activities of the Red Cross. Circulation: 5,000 through controlled mailing list. Available to interested parties nationwide. Does not accept advertising.

EMS Newsletter, Bureau of EMS, 1102 Madison Bldg., 109 Governor Street, Richmond, VA 23219; 804/786-5188. Published bimonthly by the Virginia Department of Health. Circulation: 2,100 through controlled mailing list. Available free to other state EMS offices only. Does not accept advertising.

Northern Virginia Trauma-Gram, Joseph V. Saitta, editor, P.O. Box 102, Sterling, VA 22170; 703/450-5813. Published quarterly by Northern Virginia Unit, American Trauma Society. Circulation: 600 to dues-paying members. Does not accept advertising.

VAEMT Newsletter, Joseph V. Saitta, editor, P.O. Box 102, Sterling, VA 22170; 703/450-5370. Published quarterly by the Virginia Association of Emergency Medical Technicians. Circulation: 600 to dues paying members. Available to interested parties through cooperative exchange agreements. Does not accept advertising.

Virginia Lifeline, 2015 Staples Mill Road, Suite 429, Richmond, VA 23230 804/355-5757. Published monthly by the Virginia Association of Volunteer Rescue Squads, Inc. Circulation: 4,500 through controlled mailing list, paid subscribers and dues-paying members. Yearly subscription rate: $7.50. Available nationwide to those interested. Accepts advertising.

WASHINGTON

Seattle Fire Department Newsletter, Seattle Fire Department, 301 Second Ave. South, Seattle, WA 98104; 206/625-4073. Published weekly by the City of Seattle Fire Department. Circulation: 250 through controlled mailing list. Available to individuals and organizations nationwide. Does not accept advertising.

WISCONSIN

Wisconsin EMS Newsletter, Jim Thays, editor, P.O. Box 309, Madison, WI 53701; 608/266-8853. Published periodically by the EMS Division of Wisconsin. Circulation: 2,500 through controlled mailing list. Available to interested parties nationwide. Does not accept advertising.

WYOMING

The Winds, 3843 South Truckee Way, Aurora, WY 80013; 307/777-7955. Published monthly by the Wyoming Ambulance and Emergency Medical Services Association. Provides a link between local EMTs with progress in EMS on a state and national level . . . concentrates on training and continuing education. Circulation: 725 through controlled mailing list. Available to interested individuals and organizations nationwide. Accepts advertising.

ONTARIO (CANADA)

Code 4, Mary McGreggor, Ministry of Health Promotion and Information, 9th Floor, Hepburn Block, Queens Park, Toronto, Ontario, M7A 1S2; 416/965-7897. Distributed to all ambulance personnel in the area providing them with current happenings in the emergency care field. Circulation: 5,000 through controlled mailing list. Does not accept advertising. Is available to interested parties on a limited basis.

Life Support, Frank Adamson, Managing Editor, Suite 603, 347 Bay Street, Toronto, Ontario M5H 2R7; 416/362-3569. Published quarterly by Canadian Medical Communications, Inc. for the Association of Casualty Care Personnel, Inc. Features articles about ambulance services in Canada, clinical and educational articles as well as association news. Circulation: 3,000 through subscriptions and to dues-paying members of ACCP. Yearly subscription price: $12.00. Accepts advertising.

UNIT IV
EMS COUNCILS

UNIT IV

EMS COUNCILS

In this unit, you will be encouraged to actively participate in regional councils by becoming aware of membership benefits.

At the end of the unit, you should be able to:

1. List the groups most commonly associated with EMS councils and reasons that professional contact with them might be beneficial.
2. Cite several possible benefits of EMS Council membership.

In this unit, we will do the following:

1. Learn about the four levels of EMS councils, typical group representation patterns, and general functions.
2. Determine the benefits to EMS Council participation.

NOTE: The optional training unit may be substituted for this unit.

NOTE TAKING GUIDE

NOTETAKING OUTLINE

1. EMS Councils, Four Levels:

   A.

   B.

   C.

   D.

2. Typical Representation on Councils:

   A.

   B.

   C.

3. General Functions of Councils:

   A.

   B.

4. Benefits of Council Participation:

   A.

   B.

   C.

   D.

LECTURE NOTES

TEXT

EMS COUNCILS

BACKGROUND READING FOR STUDENTS

DEFINITION OF EMS COUNCIL: An EMS Council is merely a group of interested people organized to guarantee that the highest possible level of emergency medical care is provided to its constituency. The council's ultimate goal is the reduction of mortality and morbidity in the referenced service area. Thus, the council is a necessary link between planners, providers, and consumers.

The EMS manager should be aware of the fact that there are several different types of EMS councils. For example:

1. A LOCAL EMS COUNCIL composed of representatives from one municipality/jurisdiction.

2. A REGIONAL EMS COUNCIL composed of representatives from several municipalities and/or from several local EMS councils.

3. A STATE EMS COUNCIL (often designated "Governor's Advisory Committee on Emergency Medical Services") composed of representatives selected from the entire state and/or from the regional EMS councils.

4. A MULTISTATE EMS COUNCIL which draws its representation from several states in a geographic region.

At one point there were an estimated 304 regional EMS councils throughout the country. It is now thought that there are about 120 councils remaining. Apparently, long-range funding was not sought and/or obtained for the other less fortunate councils.

GENERAL FUNCTIONS OF EMS COUNCILS

Usually, EMS councils function as planning and coordination bodies. They provide, in addition, an ideal forum for problem resolution. A further, general function is for the council to serve as a distributor for grant monies.

NOTE: The following material deals largely with the regional EMS council since it is the organization that offers the greatest benefit to the EMS Manager. However, participation in the local EMS council is presumed.

TYPICAL REGIONAL EMS COUNCIL MEMBERSHIP

There are many membership models for an EMS council. Generally, there are no requirements at the federal or state level for membership composition of the EMS council. Most EMS councils determine their own membership composition, which is then stated

in their corporate bylaws. Usually, representation is offered to EMS providers and planners, public health/safety agencies, and community leaders/ groups. It is a commonly held misconception that consumer participation is federally mandated. It is not a federal requirement, although it is certainly desirable to have consumers as council members. Several miscellaneous groups also appear frequently on EMS council rosters: media representatives, attorneys, civic groups, and juridictional representatives.

BENEFITS OF PARTICIPATION

1. Coordination

The regional EMS council can assist with the coordination of operational areas such as mutual aid situations and in the administrative planning for these activities. For example, in the planning stage an emergency operations protocol can "iron out" many command and control dilemmas before they become operational problems. Coordination of training activities can also produce cost savings as well as greater inter-jurisdictional cooperation If, for example regional seminars are offered, the total number of attendees can be greater while the total expense to an individual jurisdiction will be reduced (since cost is shared by the participating jurisdictions).

2. Fundraising

The regional EMS council often serves as a mechanism for the review and ultimate distribution of federal and state grants. In addition, if the council is a federally recognized (501c3) nonprofit corporation, it may also solicit tax-deductable donations from the public and from private foundations.

3. Legislative Activity

Regional EMS councils are in a unique position to comment on and/or review proposed state rules and regulations which impact on EMS. Further opportunity for legislative input is available by service on the state-level EMS council.

4. EMS Provider

Although it is relatively rare, a few councils actually employ field EMS personnel, own ambulances, and provide patient care and transportation.

UNIT V
PROBLEM SOLVING

UNIT V

PROBLEM SOLVING

In this unit, you will be introduced to some basic strategies and tips on problem solving.

At the end of the unit, you should be able to:

1. Recognize and explain common errors in problem solving.
2. Work through a problem using an appropriate, organized approach.

In this unit, we will do the following:

1. Learn about problem-solving strategies.
2. Discuss and practice these strategies using sample problems.
3. Apply these strategies in a group problem-solving session.

EMERGENCY MEDICAL SERVICES ADMINISTRATION

NOTE TAKING GUIDE

NATIONAL FIRE ACADEMY • NATIONAL EMERGENCY TRAINING CENTER

NOTETAKING OUTLINE

Problem solving strategies:

1. IRAC

2. ReACT

3. FICA

4. VAN

LECTURE NOTES

STUDENT ACTIVITIES

SAMPLE PROBLEMS

In each situation, a coworker enters your office and says the following:

PROBLEM 1

"WE'VE GOT A PROBLEM WITH THE MEDICAL DIRECTOR--HE'S GONE AND CHANGED THE PROTOCOLS FOR THE THIRD TIME THIS MONTH!"

PROBLEM 2

"WE HAD A CARDIAC CALL TODAY AND WHEN WE WENT TO USE THE REGULATOR, THE OXYGEN WASN'T HOOKED UP. WE ALMOST LOST THE PATIENT!"

PROBLEM 3

"THE MAYOR'S ON THE PHONE--A CITY COUNCILMAN CLAIMS A SPEEDING EMS UNIT RAN HIM OFF THE ROAD AND IT WASN'T RUNNING WITH SIREN OR RED LIGHTS."

PROBLEM 4

The Facts

1. A Basic EMT alleges that his partner was unable to insert an Esophageal Obturator Airway in an unconscious patient.
2. The patient later died.
3. It was common knowledge that there was animosity between both personnel.
4. The medical record does not indicate that any attempt was made to insert an EOA.
5. There is no record of any previous skill decay attributed to either EMT.

Your Function

Discuss the facts within your group. You will have approximately 10 minutes for the discussion. Appoint a member to report on your findings: How you would solve the problem, etc. Your report should include your analysis of the facts, and the manner/method you used to solve the problem.

PROBLEM 5

The Facts

1. An EMT alleges that 6 months ago his partner stole a solid gold ring from an unconscious patient (patient later expired).

2. It is known within the department that there was mutual dislike between both EMT's.

3. The patient's wife had stated that her husband always wore the gold ring.

4. The media has a copy of an affidavit from the complaining EMT which states that he reported the alleged theft directly to the Chief 6 months ago. He alleges that the Chief told him that the matter would be investigated.

5. No record of any such complaint is listed in the department's complaint log.

6. The media is pressing for a full-scale investigation by the Police.

7. The Chief stated to you that he wants the matter resolved ASAP. As to the complainant's charge that he advised the Chief of the matter 6 months ago, the Chief thinks that he vaguely recalls something about the matter.

8. The Mayor and the City Council have all expressed considerable interest in the situation.

Your Function

You have been assigned as the investigating officer. Discuss the facts within your group. You will have approximately 10 minutes for the discussion. Apoint a member to report to the class on your findings: How you would solve the problem, deal with the controversy, etc. Your report should include your analysis on the situation, and the prioritized steps you would take to deal with it, etc.

PROBLEM 6

The Facts

1. Two EMTs are performing CPR on a patient in cardiac arrest.

2. The patient is laying on a sidewalk in a busy section of town.
3. A crowd has already formed.

4. A distinguished-looking man approaches and states:

   a. That he is a doctor.

   b. That the patient is dead.

   c. That the EMTs must immediately discontinue CPR.

5. The EMT's do, in fact, discontinue CPR.

Your Function

Discuss the facts within your group. You will have 10 minutes for discussion. Appoint a group member to report your findings. You should analyze this situation from an EMS-management viewpoint. Specifically, your group should consider:

1. Whether the EMT's action (discontinuing CPR) was appropriate or not.

2. What steps, from a management perspective, need to be taken.

TEXT

PROBLEM SOLVING

BACKGROUND READING FOR THE STUDENT

The hallmark of an effective EMS system is not necessarily the system that has no problems. Rather, an effective EMS system has its share of problems and knows how to resolve them. Not all problems are preventable. But planning and an organized problem-solving format can reduce or eliminate many problems.

Instead of stepping into the middle of a problem, EMS managers should be encouraged to use or develop an orderly process to solve problems. What follows are several methods of problem-solution.

1. THE IRAC METHOD is often used in the legal profession. First, you determine the Issue. Next, you decide what Rule governs this issue. This presumes that there is a rule (which may not be the case). Nonetheless, if there is a rule, you decide how the rule should be Applied and what the Conclusion will be (essentially, what will logically result if the rule is applied).

   It is apparent that the IRAC method may not be appropriate for a situation where there is no discernable rule.

2. BRAINSTORMING is a process of idea sharing which allows you to gain the insight of many people. For example, if you have an Advanced Life Support (ALS) problem, you may gather together the medical director, several emergency department nurses, and physicians plus a few experienced paramedics to explore the problem and suggest options for a solution. Each person is encouraged to give their ideas, no matter how bizarre they may seem at first glance. The group then decides what options seem viable. As concensus is gained, the group "buys into" the solutions proffered. As a result, they will use their influence to see that these solutions are given a "fair shake."

   The major disadvantage of the brainstorming method is that a great deal of time may be needed to arrange and conduct a meeting. A further disadvantage is that the selection of the brainstorming group may seem an irresistible opportunity to push through your plans by "loading" the group with members favorable to your ideas. The usual result of such behavior is that the solutions, as well as the group members, lose credibility. An objective solution arrived at by an unbiased group will, in the long run, serve you and the system better.

3. THE REACT METHOD is often used in the military. It is well suited for situations that require you to think on your feet. The first step in this method is to Recognize the problem, then Analyze the situation and Consider possible solutions. Choose the most appropriate of the solutions and, finally, Take action.

   This method starts with a basic, but often overlooked, premise: You must first recognize that you have a problem. If you don't realize that you have a problem, it's unreasonable to expect you to solve it. Inherent in problem recognition, then, is the idea that an EMS system must have open communication lines.

4. THE FICA METHOD is another variation of the IRAC format. It is also in common usage in legal circles. It begins with a determination of the basic Facts, followed by an interpretation of the real Issues involved. From these facts and issues, you draw your Conclusion and develop your Argument, which supports your conclusion.

   There are two drawbacks to the FICA Method. First, you can get side tracked into a search for all the facts, instead of the pertinent ones. The test of an effective manager is to consistently make the right decisions with the bare facts. Any fool can make the right decision with all the facts. It is unlikely that you will have the time or the ability to ferret out every piece of information about a situation. Find out the basics of "who, what, when, where, and how," then move to the next step. The second drawback of the FICA Method is that it is oriented to a win/lose solution rather than to negotiation. Conversely, it is ideal for occasions where you must marshal facts and figures to arrive at a conclusion and then defend your reasoning. A budget hearing or a grant proposal, for example, would be situations where the FICA Method could prove useful.

5. THE VAN METHOD is another version of ReACT. However, it is especially useful for person-to-person confrontations. First, you determine what Values the opposition has (essentially, what does he/she want?). Next, find out your, and their, areas of Agreement. Finally, you Negotiate over the remaining areas of disagreement.

   The result of the VAN Method permits both sides to be winners. You don't get 100% of what you want and neither do they. But each of you has attained a portion of what you wanted. In order to negotiate, you need time, information, and the authority to decide on whether suggested actions are acceptable to your department.

Each EMS manager should develop his own process for problem solution. You may find, for example, that the FICA Method works well for you in certain situations. Or, perhaps, a permutation of two or three methods is effective. The important thing is to have a method that works for you.

Bear in mind, also, that the concept of problem solution implies an honest look after the storm has passed to see if a persistent problem is an indication of a training need or of the necessity for policy revision. Much can be learned by conducting a "post-mortem."

Many jurisdictions maintain complaint logs (which would be completed, normally, by the duty dispatcher) and have a written policy for investigating complaints (often using a form). Some common components of complaint logs and forms are listed below:

COMPLAINT INCIDENT REPORTING

1. Complaint Form should have the following items:

   Incident Number (if known)

   Date of Incident

   Time of Incident

   Location of Incident

   Complaint/Allegation

   Date of Complaint

   Person Making Complaint

   Assigned Investigator

   Facts Determined

   Cause Determined

   How Resolved

   Disciplinary Action Necessary

   Policy Revision Necessary

   Training Need Evident

Other Agency Referral

In-house Staff Notified

Date Matter Closed

Signature of Assigned Investigator

2. Complaint Log should have:

Incident Number

Date of Complaint

Person Making Complaint

Information (including call-back number)

Date of assignment to Investigator

Signature of Assigned Investigator

In choosing this unit, it bears repeating that problem prevention is a higher order of managerial skill than problem solution. The EMS manager should keep eyes and ears open for early indications (lower morale, an increase in complaints, etc.) of potentially serious problems.

UNIT VI
TRAINING

UNIT VI

TRAINING

In this unit, you will learn about types and sources of particular forms of EMS training, ways to identify training needs, and the basic steps in designing and conducting training.

At the end of this unit, you should be able to:

1. Identify problems which may be solved through training.
2. Explain and apply some of the basic principles of instruction and of course design.

In this unit, we will do the following:

1. Learn about the categories of EMS training.
2. Learn about the indications of training needs and the types of explanations of poor performance.
3. Learn the basic steps in the instructional method and in course design.

NOTE: This is an optional unit that may be substituted for the EMS Councils unit.

NOTE TAKING GUIDE

NOTETAKING GUIDE

Explanations of poor performance

1. Training

2. Environmental

3. Motivational

THE FOUR-STEP INSTRUCTIONAL METHOD

1. Preparation

2. Presentation

3. Application

4. Evaluation

THE BASIC STEPS IN COURSE DESIGN

1. Gather data
   a.
   b.

2. Set goals and objectives
   a.
   b.
   c.
   d.

3. Determine manner of presentation
   a.
   b.
   c.

4. Test student performance

5. Develop further

6. Pilot test

7. Follow up

8. Revision

LECTURE NOTES

TEXT

BACKGROUND READING FOR STUDENTS

CATEGORIES OF EMS TRAINING

The EMS manager, in most cases, will be heavily involved in EMS training. In smaller departments, this means the EMS manager will plan training programs, arrange for the training sites, obtain instructors, serve as an instructor, write and validate examinations, process paper work associated with certification programs, etc. This includes basic and advanced life support training and refresher training as well as additional training needs that become apparent.

TRAINING NEEDS

It is usually the EMS manager's job to spot training needs and satisfy those needs. This can be accomplished in a number of ways. First, the EMS manager may receive a complaint about performance or he may observe poor performance. Next, a review of records may indicate poor performance. For example, paramedics incapable of initiating an IV may indicate a training need... then, again, it may not.

EXPLANATIONS FOR POOR PERFORMANCE

All problems that come to your attention are not necessarily indications of training needs. Training needs usually result from an employee forgetting (or never learning) procedures. A different source of the problem might be due to environmental factors. For example, paramedics' inability to successfully initate IV's may be due to a design flaw in the needles the department purchased. Of course, another factor might be a motivational problem--your paramedics know how to start IV's, have properly functioning equipment but, somewhere in their training, the necessity for fluid replacement was glossed over. Therefore, they are not motivated to start IV's.

Experience will of course help you to determine the problem. But oftentimes we incorrectly assume that all problems are training problems. Use your problem-solving skills to analyze the situation.

THE FOUR-STEP METHOD

One way to organize your training is via the Four-Step Instructional Method: (1) Preparation--which includes writing instructional goals and objectives, and determining teaching methods and media;

(2) Presentation--which includes actually conducting the training; (3) Application--which includes supervised practice for the students; and (4) Evaluation--which includes written and practical examinations for the students and course evaluations of the instructor. Using this simple format insures that no important steps are left out.

COURSE DESIGN

Many of the courses that EMS managers conduct are already designed, developed, and packaged "...right down to the examinations." But often it is necessary for the manager to develop a program "from the ground up." If that's the case, first consider the needs of the department--its goals and objectives.

The next step is to gather data. Front-end analysis is one type of data needed. It includes things like the target group's experience in their current position, their previous job-related training, their physical characteristics, etc. More generalized data is also required. For example, what existing program can be adapted to your needs, etc. While still in the data gathering phase, also consider a task analyis to find out if the job behaviors that you may think are necessary are, in fact, necessary.

As you hone in on your courses' objectives, attempt to prioritize them. Build your curriculum using the DIG formula--sequence the content to be presented so that:

Directly related elements (must-know items) are presented first;

Indirectly related elements (should-know items) are presented next; and the

Generally related elements (nice-to-know items) are presented last, if time permits.

Going back to task analysis for a moment, you should also remember ABCD:

Audience - who is this program targeted for?

Behavior - again, what do we want the student to be able to do?

Conditions - Under what conditions will the students have to actually perform?

Degree - to what degree of accuracy or standard of excellence will the student be compared?

The selection of methods and materials must be decided on next. Consider what is appropriate, affordable, and available. If the

training is designed to develop a psychomotor skill--starting an IV, for example, the method of presentation and testing should be appropriate. In other words the presentation would include demonstration of skill ability by the instructor and the student. Similarly, the testing would include a practical examination.

A pilot test of a course will expose minor deficiencies which must be corrected. Learn from your mistakes and modify future training as necessary. Think of evaluation as being in two stages. Intitally, or during the program, it is formative. At the end of the program, it is summative.

Recalling the cyclical nature of the management process and the five steps, try to think of training design in the same way--cyclicial and involving planning, organizing, implementing, administering, and evaluating.

SAMPLE LESSON PLAN

Title of Course ("IV Technician" for example)

Date Prepared (Lesson Plans should be reviewed periodically.)

Instructional Time (total instructional time)

Learning Objective (Use the ABCD rule.)

Student Material (tools, books, etc, which the student must bring to class)

Instructional Equipment (audio-visual equipment, tools, supplies, etc., the instructors will need)

References (Cite the source of your classroom information.)

Student Homework Assignment (out-of-class work the students will perform, if any)

WORKSHOP

WORKSHOP

A workshop has been scheduled at the conclusion of the first day in order to provide an opportunity for sharing concerns about EMS administrative and operational problems with other EMS managers. Attendance at this workshop is optional.

The workshop itself is in an unstructured format. Consequently, you are encouraged to jot down matters that you would like to discuss as they are broached during the first day, in order to jog your memory during the workshop. Also, while at the workshop, you are encouraged to give your solutions to problems presented by other workshop attendees and to use the problemsolving techniques just learned.

UNIT VII
SUPERVISION

UNIT VII

SUPERVISION

In this unit, you will be introduced to basic supervisory styles, concepts, and issues, including medical control. At the conclusion of this unit, you should be able to:

1. Categorize various supervisory styles.
2. Describe traditional fire department supervision.
3. Define medical control.
4. List the three phases of medical control.

In this unit, we will do the following:

1. Learn about supervisory styles.
2. Discuss the concept of situational leadership.
3. Discuss traditional fire department management.
4. Learn about the phases and components of medical control.
5. Discuss the roles of the medical director, fire chief, and EMS manager.

EMERGENCY MEDICAL SERVICES ADMINISTRATION

NOTE TAKING GUIDE

NATIONAL FIRE ACADEMY • NATIONAL EMERGENCY TRAINING CENTER

NOTETAKING OUTLINE

1. Supervisory Styles:

    a. Theory X

    b. Theory Y

    c. Theory Z

    d. Situational Leadership

2. Traditional Fire Service Supervision

3. Medical Control

    a. Definition

b. Three Phases of Medical Control

1.

2.

3.

STUDENT ACTIVITIES

ACTIVITY SIX

List the components of medical control.

TEXT

SUPERVISION

BACKGROUND READING FOR STUDENTS

SUPERVISORY STYLES

In 1966, Douglas McGregor presented two theoretical constructs about how managers deal with employees and the underlying assumptions that lead to these attitudes. Theory X is the conventional way of harnessing human energy. It is essentially pessimistic and is based on assumptions such as: employees are lazy and dislike work, they must be directed and controlled by management, and they avoid responsibility. In order to handle these employees, the supervisor had to be firm and authoritarian.

The Theory Y construct is at the opposite end of the spectrum. It is optimistic and assumes that employees: believe work is as natural as play, are self-directed and motivated, and seek responsibility. The supervisor who believed in Theory Y style would be characterized as "flexible" and democratic.

McGregor didn't believe that either Theory X or Theory Y was right. Actually, he was more interested in exposing how our assumptions impact on our actions. He did feel,however, that authority was only one tool in the manager's "kit."

Another supervisory style is Theory Z. Used extensively in Japan, Theory Z places heavy emphasis on setting and attaining long-term goals via broad-based participative input of all departmental personnel. Good Theory Z management styles would allow all personnel to develop a consensus on any course of action. The supervisor using this style would use a humanistic approach and need excellent communication skills.

SITUATIONAL LEADERSHIP

The reality is that no one style of supervision works all the time. In other words, it depends on the situation. Paul Hersey and Kenneth Blanchard further developed this into the situational leadership concept. They were in agreement that no style of supervision worked all the time. But they also believed that there could be a preferred way of supervising, depending upon: the personnel being supervised, the task being completed, and the particular circumstances of the situation.

FIRE DEPARTMENT MANAGEMENT

Fire departments, traditionally, have managed firefighters via the Theory X construct, which is characterized by tight control. Essentially, fire departments use a quasi-military system of supervision with a formal chain of command and rank structure.

In certain situations (i.e., on the fireground) this style of supervision is probably the preferred situational style. But, it is carried over into aspects of the fire service where it may be unnecessary.

At the very peak of the fire department rank structure is the Chief--white helmet, white coat, radio, gold badge, etc.--historically, the Chief's word was law. He was the ultimate authority for all fire department personnel on all departmental matters.

The addition of advanced life support (ALS) has, in many cases, created conflicts between the Chief's authority and the Medical Director's authority. The necessity for medical control is based, in most cases, on state medical practices which specify that a physician can delegate certain nondiscretionary acts. To formalize the situation further, state health departments have established rules which describe who can perform these nondiscretionary acts and under what circumstances. Generally, to have an ongoing ALS program, you must have strict medical control. However, there is no need for conflict about authority issues if roles are clarified.

THE PHYSICIAN'S PERSPECTIVE

The EMS manager should attempt to understand the physician's perspective. A doctor's concerns often center on the quality of medical care rendered. Advanced life support as practiced on the street is only about 20 years old. Consequently, extra attention should be devoted to establishing effective managerial "checks and balances" on the department's ALS program. This includes all the previously mentioned functions of management: planning, organizing, implementing, administrating, and evaluating. Strict medical control under a qualified medical director should help to keep the physician's perspective in mind. Also, time and effort should be devoted to educating the medical community about exactly what training, equipment, protocols, etc., your personnel have.

DEFINITION OF MEDICAL CONTROL

Medical control is the provision of adequate medical supervision designed to insure quality medical care.

MEDICAL DIRECTOR DEFINITION

The medical director is the physician in charge of all medical components of an EMS delivery system. He has ultimate responsibility for all patient care.

MEDICAL CONTROL PHASES

There are three broad phases of medical control which the medical director oversees. They are:

1. PROSPECTIVE--before the occurrence of an emergency, typically during training. An example of prospective medical control is the set of protocols (or written guidelines) that the medical director develops.

2. IMMEDIATE--during the emergency. For example, a physician communicating medical orders to paramedics at the scene is exercising medical control.

3. RETROSPECTIVE--after the emergency. Retrospective medical control includes ALS continuing education, medical auditing, etc.

All three phases are necessary if you really intend to have good medical control.

DISCUSSION OF ROLES

At some point in the development of an ALS system, a clear decision should be made as to the roles of the fire chief, the medical director, and the EMS manager. One possible mechanism to accomplish this is to develop a written agreement delineating who is responsible for what. For example, in fire department matters, the fire chief is the ultimate authority; in medical matters the medical director is the ultimate authority, and the EMS manager will coordinate all ALS training, field supervision, etc. Another useful mechanism is to form a medical oversight committee composed of physicians experienced in ALS, the EMS manager, the medical director, and other similar personnel. The committee would be charged with long-range planning and the mediation of disputes involving medical policy. An additional option is the development of a job description for the medical director.

The next unit deals with legal concepts. Effective supervision, particularly in ALS matters, coupled with quality medical control, can greatly reduce a department's liability exposure. There are several legal concepts that deal specifically with medical control matters.

MUTUAL AID®

The Medical Intervenor

Generally, when referring to a medical intervenor the inference is that this is an on-scene physician, who is not part of your EMS system. In actuality, any medical person (EMT, nurse, etc.) could also be considered a medical intervenor. Recent experiences in many jurisdictions have indicated that major problems revolve around people who claim to be physicians; and physicians (most often well meaning) who stop to assist but have little knowledge of your system's protocols, equipment, or paramedical skills.

Certainly, the identification of "physicians" on-scene is a major concern. Paul G. Lalonde, Director of Ambulance Services, Amherst (Massachusetts) Fire Department, advised that his major problem in a town with three colleges is differentiating between people who claim to be doctors and people who claim to be physicians. Lalonde stated that many times "doctors" are in fact doctors of philosophy, etc., rather than medical doctors. Complicating the problem is the lack of uniform I.D. cards for physicians.

Another concern, recently reported in jems, is the physician who attempts to intervene and is apparently intoxicated. Echoing the same complaint, R. Jack Ayres, Jr., Esq., well-known medical-legal expert, of Dallas, Texas, indicated that on more than one occasion an apparently intoxicated physician had to be restrained and/or arrested in that jurisdiction for interfering with a rescue operation.

One physician, upon interview, stated that many physicians fear that, having stopped to assist, they cannot leave a scene (regardless of paramedical assurances that no help is needed) without liability exposure for abandonment (i.e., severing a medical relationship without the patient's consent). Indeed, an attorney experienced in health matters advised that there is nothing to prevent a physician from being named as a defendant in a lawsuit, even when he has not initiated any treatment. Questions about whether treatment was initiated can arise from just about any gratuitous comments made by an on-scene physician.

As EMS managers one of our major functions is not only to be a problem-solver but a problem-preventer. Here are some tips for dealing with medical intervenors:

1. Have a plan. The plan should be formulated with input from the medical director, experienced paramedical personnel, the Medical Society, and yourself.

2. The plan should be discussed with all field personnel. Including it in your system's protocols is beneficial.

3. Insure that the issue of physician identification is addressed in the plan. This is crucial.

4. Just in case your operational personnel find themselves in a situation that is going "sour" your procedure should clearly state their options (call the police, revert control to the on-line medical director, etc.).

5. Emphasize that ultimate medical control rests with your system's medical director. Logically, the medical director should also field all complaints from other physicians.

Consider whether a small pocket card (for example, as used by the South Central Connecticut EMS Council, Inc.) would be useful. The referenced Connecticut Council's states: Thank you for your offer of assistance. Be advised that these Advanced EMTs are operating under the authority of Connecticut law and the South Central Connecticut Emergency Medical Services Council. No physician or other person may intercede in patient care without the emergency physician on duty relinquishing responsibility of the scene via radio or telephone. If responsibility is given to a physician at the scene, that physician is responsible for any and all care at the scene and enroute to the hospital and must sign the medical record.

Remember, that your system, if it fails, will fail at the weakest link. Although no protocol or procedure will substitute for common sense, at least some general guidelines will give your operational personnel some basis for action, while preserving a good working relationship with the community's physicians.

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UNIT VIII
LEGAL CONCEPTS

UNIT VIII

LEGAL CONCEPTS

In this unit, you will be educated on the basic meaning and application of EMS legal concepts.

At the end of the unit, you should be able to:

1. Define pertinent legal terms.
2. Cite guidelines for the application of consent and abandonment laws to emergency cases.
3. Explain the importance of timely, complete, and accurate records from a legal standpoint.

In this unit, we will do the following:

1. Learn about pertinent legal concepts, including consent and abandonment laws.
2. Practice identifying legal concerns in a case study.

NOTE TAKING GUIDE

NOTETAKING OUTLINE

1. Legal Concepts

   a. Types of Laws:

      (1)

      (2)

      (3)

   b. Good Samaritan Statutes

   c. Duty to Act

   d. Abandonment

   e. Detrimental Reliance

f. Consent

(1) Implied:

(2) Express:

g. Medical Records

STUDENT ACTIVITIES

ACTIVITY SEVEN

THE FACTS

Two EMT's on an ambulance under your supervision respond to a heart attack call.

While enroute, they approach an intersection where it is apparent that another accident has occurred.

They stop their vehicle and discover that a child has been struck by an auto.

Simultaneously, with their discovery of the child's condition, they are advised to expedite their original response due to the heart attack patient's condition. He has gone into cardiac arrest.

YOUR FUNCTION

Within your group, determine what the two EMT's should do. Decide what liabililty exposure they engender. Finally, describe how this liability could be reduced. Appoint a reporter to present your findings. You will have a total of 15 minutes for this activity.

ACTIVITY EIGHT

THE FACTS

You are the senior member of a two-person BLS ambulance crew responding to a drug overdose call. You arrive on the scene and find a 15-year-old female that has taken an undetermined number of sleeping pills and consumed a half-pint of whiskey.

The assessment of the patient and the situation reveals, in part, that:

1. She recently separated from her husband.
2. Her speech is becoming slurred.
3. She will not allow you to obtain her blood pressure.
4. Pulse and respirations are becoming weaker.
5. She refuses treatment and transportation, and has repeatedly stated that she "...wants to die."

YOUR FUNCTION

Within your group determine:

1. What actions you would take, if any.
2. What liability exposure this situation, and your response to it, present.
3. How, from a management standpoint, you can reduce your liability risk.

Choose a reporter from your group to advise the class of your findings. You will have 10 minutes to complete this activity.

ACTIVITY NINE

THE FACTS

You are the manager of a fire department's EMS division. While sitting in your office planning your budget, you receive the following telephone call:

> "Hello, this is Robert Smith, the attorney for John Doe. Two years ago Mr. Doe was involved in an automobile accident. He was treated by two of your people and transported by them to Central City Hospital. I'd like to stop by later today and pick up a copy of the incident report and also interview the two EMT's."

YOUR FUNCTION

Within your group decide:

1. What you will tell Mr. Smith.

2. What concerns you have, if any, about what he is requesting.

Choose a reporter from your group to advise the class of your findings. You will have 5 minutes to complete this activity.

TEXT

LEGAL CONCEPTS

BACKGROUND READING FOR STUDENTS

1. GENERAL OBSERVATIONS regarding the law: The EMS manger should be aware that the law is not static. Consequently, this unit deals with currently recognized legal principles which are broad and general. Laws also vary from state to state. Thus, you are encouraged to obtain copies of codes, ordinances, etc., pertinent to your area of concern from your own state and have an experienced attorney explain them to you.

2. TYPES OF LAWS

   a. ADMINISTRATIVE LAW "That branch of public law which deals with the various organs of the sovereign power...and prescribes in detail the manner of their activity." Black's Law Dictionary, Fourth Edition, Revised.

      EMS example of administrative law: Rules and regulations promulgated by the State Health Department to govern the provision of ambulance service (i.e., types of vehicles, equipment required, etc.).

   b. CIVIL LAW "That rule of action which every particular nation, commonwealth, or city has established peculiarly for itself...that division of municipal law which is occupied with the exposition and enforcement of civil rights." Black's Law Dictionary, Fourth Edition, Revised.

      EMS example of civil law: Negligence.

   c. CRIMINAL LAW "That branch or division of law which treats crimes and their punishments. In the plural--criminal laws--the term may denote the laws which define and prohibit the various species of crimes and establish their punishments." Black's Law Dictionary, Fourth Edition, Revised.

      EMS example of criminal Law: Carrying a concealed weapon without an authorizing permit; assault and battery.

      (1) ASSAULT "An intentional, unlawful offer of corporal injury to another by force...under such circumstances as create well-founded fear of imminent peril, coupled with apparent present ability to execute attempt, if not prevented." Black's Law Dictionary, Fourth Edition, Revised.

      (2) BATTERY "Any unlawful beating, or other wrongful physical violence or constraint, inflicted on a

human being without his consent...an unlawful touching of the person of another...the actual offer to use force to the injury of another is assault; the use of it is battery, which always includes an assault; hence the two terms are commonly combined in the term "assault and battery." Black's Law Dictionary Fourth Edition, Revised.

3. OTHER TERMS

a. TORT "A civil wrong; a violation of a duty owed to a plaintiff by operation of law rather than by contract." Physician's Glossary to Medical-Legal Terms, Mary E. Dufner, editor. Note that a tort is considered to be part of civil law.

EMS example of a tort: A negligent act, such as an improperly secured patient falling off a back board, injuring his spinal cord.

NEGLIGENCE "The failure to exercise the degree of care that an ordinarily prudent person would exercise under the same circumstances, and the result of which is the breach of a legal duty." Glossary to Medical-Legal Terms, Mary E. Dufner, editor.

b. CONSENT "A concurrence of wills. Voluntarily yielding the will to the proposition of another; acquiescence or compliance therewith." Black's Law Dictionary, Fourth Edition, Revised.

(1) EXPRESS CONSENT "That directly given, either [orally] or in writing. It is positive, direct, unequivocal consent, requiring no inference or implication to supply its meaning." Black's Law Dictionary, Fourth Edition, Revised.

(2) IMPLIED CONSENT "That manifested by signs, actions, or facts, or by inaction or silence, which raise a presumption that the consent has been given." Black's Law Dictionary, Fourth Edition, Revised.

c. GOOD SAMARITAN DOCTRINE "One who sees a person in imminent and serious peril through negligence of another cannot be charged with contributory negligence, as a matter of law, in risking his own life or serious injury in attempting to effect a rescue, provided the attempt is not recklessly or rashly made...negligence of a volunteer rescuer must worsen position of person in distress before liability will be imposed." Black's Law Dictionary, Fourth Edition Revised.

The actual wording of good samaritan acts, or statutes, varies widely from state to state. However, certain common elements emerge. In order to claim good samaritan protection, the rescuer must, generally, act in good faith, act as a reasonable person would act, and serve without compensation. Usually, liability arising from operation of a motor vehicle is exempted from good samaritan protection (i.e., if you cause an automobile accident you may be liable).

Implied in the concept of acting as a "reasonable person" is the notion of a standard of care, which is a way of measuring your adherence to the highest skill level attained. Thus, the standard of care that an EMT-paramedic would be held to is considerably higher than that to which a boy scout who had completed a first aid merit badge would be held. Essentially, as you increase your level of training, your ability to perform at more sophisticated levels is also increased, as is the expectation that you will perform at those higher levels.

The doctrine of the good samaritan arises from the concept known as sovereign immunity. A sovereign, or king, could do no wrong legally since his authority, it was believed, derived directly from God. Eventually, the principle evolved that employees of kings, acting as his agents, could also do no wrong. In America, the concept is also known as governmental immunity. Since fire service personnel provide a governmental service, they also, under this doctrine, may be immune from liability. However it should be stressed that you must be serving without compensation in order to be considered a good samaritan in most states. Recent legal activity also indicates that the concept of governmental immunity (and the good samaritan doctrine) has eroded considerably.

At any rate, most good samaritan statutes only provide immunity from liability, not from having a civil suit filed against you. Generally, anyone can sue anyone else at any time for anything. Whether the defendant will be found liable (which is another way of saying that the defendant was responsible for the civil wrong) and whether a judgment (a court decision) with damages (a money award granted by the court) will be rendered are entirely different matters. Operational EMS personnel should not place their hopes for legal vindication only in their state's good samaritan act but should be encouraged to obtain departmental and/or personal medical malpractice insurance.

d. ABANDONMENT--terminating a medical relationship between yourself and a patient without the patient's consent. The medical relationship does not necessarily begin with your arrival on the scene but may result from telephonic contact between the patient and the dispatcher.

Generally, for an on-scene rescuer to avoid a suit brought for abandonment, he must have the patient's consent to discontinue treatment or to leave the scene; or he may discontine treatment and/or leave the scene if:

(1.) The rescuer becomes physically exhausted.

(2.) Other rescuers of equal or greater ability assume care/responsibility for the patient.

(3.) The patient is rescued/resuscitated.

(4.) A physician pronounces the patient dead.

e. DEFINITION OF "DOCUMENT"--the term "document" means the original or true copy of all memoranda, correspondence, letters, minutes of meetings, indexes, working papers, proposals, contracts, agreements, notes, surveys, studies, analyses, reports, bulletins, logs, appointment calendars, record entries, telephone message slips, charts, ledgers, tapes, tape recordings, data retrieval media, filmstrips, video cassette tapes, accounting media, microfilm, or any other printed, written, or tangible statements or records of communication, regardless of the form thereof, together with all attachments, enclosures, or exhibits thereto, prepared by, for, or in the possession or control of a defendant or witness.

f. DETRIMENTAL RELIANCE--the concept of detrimental reliance is a key one in emergency care. Also known as EQUITABLE ESTOPPEL, it has several important elements. First, a commitment to do something must be made. The commitment must be substantial and material. The victim (plaintiff) must have knowledge of the commitment and rely on the commitment. Then, the commitment must be breached and damage done to the victim. There must be a cause and effect relationship between the breach of the commitment and the damage done. This is known as proximate cause.

Thus, a department that makes a commitment to ALS services to the community has taken on a public duty, which it may breach only at some risk.

4. EMS INCIDENT REPORT FORMS

The EMS manager should periodically review departmental incident report forms to insure that the forms are still satisfying the department's current information needs. Incident report forms, generally, contain the following information:

a. DEPARTMENTAL DATA: Incident Number, Medic Number, Ambulance Unit Number, Assisting Fire/EMS Unit Numbers, Type of Call (nonemergency, routine transport, etc.) Apparatus Mileage, Dispatch/ Arrival/In-Service Times, Date, Box Number, Crew Information (Senior EMT/Paramedic, Driver, etc.).

b. PATIENT DATA

(1) GENERAL: Name, Address, Incident Location, Age, Sex, Race (optional), Next of Kin, Patient's Physician, Current Medications, Allergies, Residency Data, etc.

(2) FINDINGS: Description of patient condition to include chief complaint, past medical history, vital signs, EKG, etc. Often organized into subjective (chief complaint), objective (patient examination), assessment (impression) and plan (therapy). Note that these findings are often accompanied with a "stick-man" figure with notations on sites of injuries, etc.

(3) TREATMENT: Care rendered prior to your arrival (with names of those who provided it, if possible), as well as the care you provided including Airway Management, Oxygen Therapy, Medications Administered (types, amount, time of administration, effects, route, authorizing physician, etc.), Cardiopulmonary Resuscitation, Medical Anti-Shock Trousers, EKG (paper tapes attached), Wound Treatment, Splinting/ Immobilization, Burn Care, Defibrillation, IV's initiated (location, fluid administered, etc.), psychological first aid, blood drawn, and any difficulties associated with the foregoing.

c. HOSPITAL DATA: Receiving Department (Emergency, direct admission to ICU/CCU, etc.), patient disposition, signature of person receiving patient from EMT's, Patient Billing Code, Pharmacy Re-supply Data, Personal Property Transfer, Insurance Information, etc.

D. MISCELLANEOUS: Notation of equipment left/damaged at hospital, Statement of Patient Refusal of Treatment and/or Transport, Communications Difficulties (interpersonal and radio), police involvement (including names/unit numbers), billing statement, weather conditions, report distribution data, etc.

5. GENERAL COMPONENTS OF EMS RECORDS

It is also wise for the EMS manager to review all departmental EMS records--complaint forms, training documents, etc., to insure that they are:

a. Written
b. Accurate/Pertinent
c. Timely Completed
d. Legible
e. Complete

Bear in mind that a well-designed form actually encourages proper completion. If a lawsuit arises, the outcome may hinge on a single document, prepared many years prior.

EMTS AND MEDICAL RECORDS

There was a time, not many years ago, when ambulance and EMT medical record keeping requirements were minimal. Little, if any, documentation was kept other than the victim's name and date of service in order to prove that an emergency call had, in fact, been made.

Today, EMT medical record keeping considerations are becoming increasingly important. The true significance of careful medical record keeping can be fully appreciated by EMTs if they observe the plague of malpractice litigation and scrutiny surrounding physician and nurse members of the EMS team, as well as an increasing number of EMTs. An accurate and carefully documented EMT medical record is absolutely critical if the EMT is to be successfully defended in a malpractice suit. Proper attention to medical record keeping affords the EMT the first, best, and perhaps only chance to avoid or survive a malpractice lawsuit.

The purpose of this discussion is to impress upon the EMT and EMS personnel in general the legal significance of properly prepared medical records. EMTs must always be mindful that the medical record they prepare today may be in the hands of a plaintiff's attorney tomorrow. Once the EMT appreciates the medicolegal significance of EMT medical records, the EMT should be willing to devote more care to its proper preparation.

The EMT record is a medicolegal challenge of the highest priority. Failure to properly record may render the EMT a loser in a malpractice lawsuit even if he did not deviate from accepted standards of care.

RECORDMANSHIP

Unfortunately, the attitude of some EMTs reflects the belief that the proper completion of an EMT medical record is an annoying burden to be gotten rid of as quickly as possible. This attitude may yield unfortunate results. EMTs should regard the EMT medical record as a medicolegal challenge of the highest priority.

EMTs who have the misfortune of being sued for malpractice by a patient will be in a much more favorable position if the EMT medical record clearly indicates that the EMT had acted properly under the circumstances of the case. In fact, a well documented and complete EMT medical record may effectively deter a plaintiff's attorney from filing suit in the first place.

In malpractice cases, it is not uncommon for the plaintiff's attorney to "shotgun" multiple defendants in a malpractice case, including EMTs, emergency physicians, nurses, and other medical and health care personnel who may have had contact with the patient. A clear and complete EMT medical record might conclusively prove that the EMT is not a proper party defendant in the suit. Thus, EMTs have much to gain by carefully preparing a medical record which could avoid their unnecessary joinder as a codefendant in a malpractice case. Once the EMT has been named as a defendant, no matter how innocent of blame, the EMT must answer the complaint and present a defense.

Good record keeping is an acquired skill. EMTs can benefit from the lessons learned by physicians and other health care personnel who have become acutely sensitive to the importance of accurate and complete medical records.

It is important for the EMT to prepare EMT medical records that are legally capable of standing on their own.

The EMT medical record, as is the case for any medical record, must be constructed so that it represents an accurate, logical and complete story as reflected by the specific facts. Practical considerations from the EMT's experience will often influence what is recorded.

For example, when confronted with the intoxicated patient, it is often more discrete to record "A.O.B." (alcohol on breath)

rather than "the patient is drunk." This discrete abbreviation tends to protect any insurance rights the patient/victim may have, while preserving for the EMT the opportunity to subsequently raise the patient's intoxication by way of explanation should the need arise.

The EMT record should be completed within a reasonable period of time, preferably no later than the conclusion of each emergency call. Allowing reports to backlog will lead to confusion caused by incomplete recollection on the part of the EMT. Important details are inevitably lost with increasing time delays.

COMPOSITION OF THE EMT RECORD

An EMT medical record should be made for each patient receiving emergency medical services. EMT medical records are important because they help insure continuity of treatment for the patient once he has arrived at the hospital. Although record keeping is an important priority for the EMT, it should never supersede the rendering of appropriate patient care by the EMT. As EMTs become more experienced, they are increasingly able to treat and observe emergency victims at the same time, and thus, gather all the information they will need for the EMT medical record.

It is also important for the EMT medical record to have a small space available to deal with patients who are mentally competent and who refuse all offers of emergency care. The prudent EMT should carefully document such mentally competent, patient refusals since there may be repercussions later on. The patient may attempt to make the EMT a convenient scapegoat for the patient's own bad judgment.

The EMT medical record should be able to provide a great deal of information.

The full meaning of the word RECORD is as follows:

Render aid to the patient first;
Examine the patient & clothing;
Collect personal effects, drugs, etc.;
Observe & record patient's condition;
Record statements of patient & relatives;
Determine cause of injury if possible.

Medical information which the hospital and emergency department staff will require from the record will include: 1) identification and vital statistics of the patient (age, sex, kin); 2) description and cause of injuries or nature of illness; 3) signs and symptoms at the scene and in transit; 4) vital signs of the patient at scene (if possible) and in transit; 5) emergency care rendered by the EMT at the scene and during transport; 6) any rescue measures or treatment before the arrival of the EMT; 7) any medications used by the patient or given by the EMT; and 8) any drugs or poisons taken and their containers.

The EMT medical record may also provide legally important information, especially if the police are not present at the scene of the emergency. The EMT medical record may then be relied upon for information such as: 1) an account of circumstances involving assault, homicide, rape, child abuse, animal bites, etc.; 2) dying statements of the patient recorded in the patient's exact words, uttered in the presence of a witness if possible; 3) a note of the disposition of the patient's valuables; 4) suicide notes or other relevant papers; 5) a record of the exact location and position of the patient before moving him.

Information important to the public health of the community may have to be derived from the EMT medical record. For example, a copy of the EMT medical record may have to be forwarded to the coroner or medical examiner in case of accidental or sudden death at the scene or during transport. Also, a copy of the EMT medical record may have to be sent to the community health officer in the case of a communicable disease or animal bites. Last, a copy of the record may have to be forwarded to public safety authorities if the emergency involves hazards such as gas, fire, electricity, toxic chemicals, radiation, etc.

Finally, the EMT medical record should provide information important for the administrative operation of the ambulance service or EMT unit itself. Included among such information is a daily log of all ambulance runs, identification of the vehicle and crew making the run, location of the site of the emergency and also the receiving hospital, originator of the call for service, type of service requested, and the type of injury or illness reported. Obviously, EMT medical records will also be used by appropriate reviewing supervisory personnel to assess and improve the quality of emergency medical services rendered. These records may also be subpoenaed by the patient and his legal representatives if a serious question arises regarding the emergency medical services rendered.

There is no one ideal EMT medical record form. Each EMT unit has evolved its own EMT medical record form. Most of the EMT medical record forms in existence have drawn from other forms which have preceded them. Also, there will be a significant difference in the medical records of basic EMTs as opposed to EMT-Paramedics, who obviously require a much more detailed EMT medical record due to the more complex nature of the medical services rendered by the EMT-Paramedic.

The EMT medical record should, at a minimum, consist of the following sections: 1) identification of EMS vehicle and crew; 2) identification of the emergency call date and time, as well as the EMT response; 3) location of the emergency; 4) name and other identifying information of the patient; 5) originator of the call; 6) type of accident or injury reported; 7) EMT patient evaluation, including vital signs, pupils, skin temperature and color, level of consciousness, and other relevant physical observations of the patient; 8) relevant past medical history of the patient, such as emphysema, pacemaker, etc.; 9) emergency care rendered by EMT, including airway establishment, suction, oxygen, CPR, cervical collar, back board application; 10) rescue and extrication information when extrication is complicated. It is also helpful to have an anatomical drawing on the EMT medical record so that the EMT can circle areas of injury in order to visually portray the EMT physical assessment.

Again, it is important to realize that there is no one, perfect EMT medical record. Rather, there is much to be learned from reviewing a great number of EMT medical records. EMTs should periodically review their EMT medical records to be sure that they continue to satisfy their medical record keeping needs.

RECORD CHANGES - BEWARE

An important concern for the EMT, in addition to EMT medical record documentation, is the process by which modifications or changes are made in the EMT medical record.

Changing a medical record was rarely a problem in times past when the risks of being sued for malpractice were insignificant. Today, however, changing or altering a medical record may be fraught with legal hazards. Why is this so?

As was stated previously, the medical record prepared by the EMT is the most important document upon which the EMT's legal defense will be based. The EMT record is legally considered to be a document made "in due course" (i.e., made in the regular course of patient care) and is thereby admissible into evidence in a court proceeding. Once admitted into evidence, the EMT medical record will be closely examined by the judge and jury.

It is bad enough that changes are made in medical records under normal circumstances due to human error in recording information. However, it is more hazardous to make medical record changes in those cases where a patient has sustained an injury which might possibly be due to negligence.

If something has been improperly or incorrectly recorded in the EMT record, how should the EMT remedy this situation? Erasures and blackouts are generally frowned upon as methods of correcting medical records. The rationale for this is that such methods create suspicion about the integrity of the medical record. These methods tend to create a presumption that something is being covered up.

Tampering with an EMT run report can help make the plaintiff's case for malpractice against the EMT. The patient's attorney may have previously obtained the EMT medical records and may be setting a trap to entice the EMT to make harmful changes in the EMT records.

EMTS should devise and follow a proper method for making necessary corrections in EMT medical records. A method frequently recommended for making hospital medical record corrections can be used by the EMT. Corrections may be made by drawing a line through the error and then signing and dating the correction made. This method allows the error to remain visible and eliminates any suspicion of a cover-up.

Insurance companies and defense attorneys constantly warn health professionals not to tamper with or change medical records after a possible malpractice incident has occurred. The reason for such a warning is that the plaintiff's attorney may have previously obtained a copy of the patient's medical records in question and may be laying a trap to entice the unwary health professional into tampering with the medical records. The detrimental effect of such tampering should be obvious to the EMT. Should a trial result, evidence of tampering

can reduce the EMT's credibility to the point where the jurors may not believe him at all.

EMT's should be mindful that plaintiff's attorneys are adept at working the health care field. For example, many plaintiff attorneys may request a patient's EMT medical record under the guise of an automobile accident or worker compensation case, when in fact they are evaluating the case as a potential malpractice action.

Medical record questions occur in every medical and health care malpractice case. EMTs can learn an important medical record tampering lesson from an interesting emergency department medical record case, that of Carr v. St. Paul Fire & Marine Insurance Company, 394 F. Supp. 821 (1974).

This suit was filed by the wife of the deceased patient, Carlos Carr, to recover damages for alleged negligence on the part of the Washington General Hospital and its employees in the treatment and failure to treat Mr. Carr. Mr. Carr had been treated and released from the emergency department and died several hours later at his home.

The case was ultimately brought to trial before a jury which returned a verdict in favor of the plaintiff. The jury awarded $35,000 in damages to Mrs. Carr and $40,000 for the benefit of Mrs. Carr's minor children. The defendant hospital and employees petitioned the court to overturn the jury verdict, or in the alternative, to grant a new trial. On appeal, the court reviewed the evidence which had been presented at the trial. The court's opinion clearly points out the crucial role that a patient's medical record assumes in a malpractice case.

The evidence in the Carr case disclosed that, prior to going to the hospital in the early evening of January 8, 1972, the plaintiff called the hospital to ascertain if there was a doctor present and was advised that a doctor was available.

On this date, the E.D. personnel consisted of one LPN, Ruth Roberts, now Ruth Elizabeth Nail, and two orderlies, Ronald Paul Fowler and James Kenneth Nail. The nurse and Mr. Nail were sweethearts at the time and later married.

After the arrival of the plaintiff and her husband, the vital signs of decedent were taken, including blood pressure, heart rate, temperature and respiration. These were taken by one of the orderlies and conveyed to the other orderly for inclusion in the E.D. medical record. The nurse in charge was an LPN and was not in the room when the orderlies were taking the vital signs.

She conferred for a short time with the orderlies and, in accordance with the decedent's wishes, telephoned his family physician, who was out of the city until the following Monday. The nurse testified that she offered to call the doctor on call from the hospital but the decedent said that he preferred to wait until his own doctor returned.

The coroner prepared the death certificate based on history received from Mr. Carr's family physician as well as symptoms described by E. D. personnel and from the E. D. report filled out by the nurse on duty at the time.

However, the plaintiff testified that she and the decedent demanded that any available doctor be called, but that the nurse failed to call anyone after failing to contact the family physician. Mrs. Carr further testified that the nurse was aware of the physical condition of the decedent, that he had severe abdominal pains and vomiting as well as a history of diabetes. The nurse and the orderlies knew the decedent was in pain and in need of relief, but none was afforded. Mr. and Mrs. Carr were permitted to leave the hospital unexamined by a physician.

After returning to their home, Mr. Carr's pains grew worse. They again called the hospital and an ambulance was sent to return them to the hospital. The testimony did not disclose the exact time of return to the hospital.

The coroner was called by an undetermined party. He testified that Mr. Carr had not been dead an hour before he saw him and that his body was still warm. The E.D. personnel testified that the decedent's vital signs were normal, but they also testified that the record of the examination of the vital signs was destroyed that night and was not seen by anyone other than the two orderlies, the nurse and the coroner. No explanation was given as to why the record was destroyed or as to what the orderlies and LPN considered normal vital signs.

The personnel were all close friends,

and at the time of this incident, the nurse and one of the orderlies were engaged to be married. A question of fact was raised by the testimony of the plaintiff, the orderlies and the nurse. This question of fact about exactly what occurred, along with other questions, was submitted to the jury for its decision.

The defendant contended that the court erred in allowing testimony as to changes in hospital procedures subsequent to the death of Mr. Carr. The defense objection was based on the evidence which disclosed that the emergency room employees destroyed the E.D. record after Mr. Carr died. The defense contended that the testimony should not have been admitted since it implied that the hospital changed its procedure as a result of the incident after Mr. Carr died.

In response to this contention, the court said that it did not know why the record was destroyed. However, the court did say that "the plaintiff was greatly hampered in proving just what was done by the employees and what their examination disclosed, and the jury had a right to consider the effect that such destruction had

The E. D. medical record relative to the patient's vital signs was destroyed and not available for inspection by anybody after it was seen by the coroner. The cause of death was listed as "ecute myocardial infarction, arteriosclerosis secondary to diabetes."

in determining the actual facts. It seems highly unreasonable that the findings of the physical condition of a person examined by the emergency room employees would be destroyed."

The court went on to comment further: "No one knows the effect that such action had on the jury, but the jury certainly had a right to infer that the record, had it been retained, would have shown that a medical emergency existed and that a doctor should have been called and that more attention should have been given (to Mr. Carr) than was given." Thus, the court sustained the jury verdict rendered in favor of the plaintiff.

CONCLUSION

The Carr case is a bit extreme, but it is nevertheless informative for EMTs. In addition to not tampering with EMT medical records after a potential malpractice incident has occurred, EMTs should obviously never attempt to destroy the EMT medical record. The Carr case also served to underscore the importance of recording the patient's vital signs. As obvious as this may seem, the recording of vital signs is often overlooked by physicians and nurses as well as EMTs.

The question sometimes arises as to who actually owns the EMT medical record. The EMT record itself is the property of, and owned by, the EMS association or organization which produced it. Courts however have separated the property rights involved in medical records into property rights affecting the ownership of the physical record and property rights affecting the ownership of the information contained in the record. Although the EMS association or organization owns the medical record, the patient does have some legal right to the medical information contained in the record. In most states, such EMT medical records are legally obtainable through the courts if necessary.

This article has attempted to discuss the important area of EMT medical records. It is in the EMT's own self interest to develop good EMT record keeping habits. The EMT medical record may be the best legal defense or the most damaging evidence depending on how the EMT has documented the record.

In evaluating one's own record keeping habits, the EMT should ask: 1) Is the record complete? 2) Is the record completed in a timely fashion? 3) Is the record accurate? 4) Is the record legible? 5) Is it free of irrelevant nonprofessional information? If these questions are answered in the affirmative, EMTs will have accomplished a great deal in the prevention of malpractice problems.

# # #

IN THE NEXT ISSUE...

I. Dispatch Problems in Miami, Florida.

II. E.R. Refusal of EMTs

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EMT LB

UNIT IX
FINANCIAL MANAGEMENT

UNIT IX

FINANCIAL MANAGEMENT

In this unit you will be introduced to financial matters which impact on the EMS system. At the end of this unit you should be able to:

1. List the functions of a budget.
2. Describe two types of major EMS expenses.
3. Describe and discuss possible EMS funding options.

In this unit, we will do the following:

1. Learn about the budgeting process, and about preparing a budget.
2. Learn about EMS capital and operating costs.
3. Learn about various funding options.
4. Identify issues of concern in community fundraising.

NOTE TAKING GUIDE

NOTETAKING OUTLINE

1. Purposes of Budget

   a.

   b.

2. Budget Preparation

3. EMS Expenses

   a. Types of capital Costs

   B. Types of operating Costs

4. Funding Options

The budget may be supplemented by:

a.

b.

c.

d.

e.

f.

LECTURE NOTES

STUDENT ACTIVITIES

ACTIVITY TEN

COMMUNITY FUNDRAISING

For each of the listed types of fundraisers, write down two concerns which must be addressed and/or avoided:

Fundraiser	Concerns
A. Annual Fund-Drive	1. _____
	2. _____
B. United Way	1. _____
	2. _____
C. Product Sales (smoke detectors, etc.)	1. _____
	2. _____
D. Dances	1. _____
	2. _____
E. Bingo	1. _____
	2. _____
F. Annual Dinner (Fish Fry, Bull Roast, etc.)	1. _____
	2. _____

ACTIVITY ELEVEN

YOUR FUNCTION

Within your group develop/research several fund-raising options, beyond those listed in your student manual. These methods should be selected based on their potential usefulness, rather than on their proven ability to raise large amounts of money. Be creative. Choose a reporter from your group to advise the class of your findings.

TEXT

FINANCIAL MANAGEMENT

BACKGROUND READING FOR STUDENTS

THE BUDGET PROCESS

No one expects an EMS manager to become a certified public accountant. On the other hand, it is expected that you will be able to prepare a budget and understand the budget process.

Preparation of a budget from scratch is the exception rather than the rule. Generally, you start with last year's budget and merely revise it with appropriate inflation figures and new service costs.

A more thorough approach to budget preparation, however, requires a serious examination of your department's goals and objectives. Remembering the cyclical nature of the management process, which was discussed earlier, you know that goals and objectives change over time due to feed-back, political shifts, etc. After analyzing your goals and objectives, you then prioritize them.

Following prioritization, estimate the cost of each objective (or subobjective). There are several methods of accomplishing this: Compute last year's cost plus the current inflation factor; ask EMS managers in nearby jurisdictions for their figures, etc. (presuming they have similar programs).

Next, estimate the expected income of the department. Prior to budget submission, work sessions are often held and you get a rough idea of what your department's total budget will be (increased by 10%; reduced by 20%, etc.). With this knowledge you can then arrange your goals and objectives in final priority.

The last step in the budget process is to gain approval for your budget. Here are a few things to remember about getting that budgetary approval:

1. Essentially, the budget is a competition between different departments; all attempting to gain a portion of a finite amount of money. Preparation pays dividends: the most prepared departments consistently get a bigger chunk of the budget "pie." Statistics in understandable form (charts, graphs) help you to sell your program; as does discreet "politicing."

2. Long-term agreements between your department and higher management mean less items to justify at budget time--for example, a policy that a replacement abmulance will be purchased every 5 years.

3. Good public relations should go beyond your dealings with the public. Also keep relations cordial with the budget/accounting staff. An adversary relationship won't help you or your department.

Unfortunately, the mere fact that a budget has been approved no longer guarantees that the money will be allocated. To insure that money actually gets spent, you have to make your budget a priority all year long, not just for a few weeks or months.

MAJOR EMS EXPENSES

It is not uncommon for the EMS manager to receive requests for information about the budget from the public. You should be able to explain where every cent went. The two major expenses are capital costs and operating costs.

Capital costs are usually for start-up or initial funding, including purchase of ambulances, medical equipment, facilities, and other items usually purchased when starting or up-grading a service.

Operating costs usually are continuing or ongoing expenses. For career departments, the major expense (85%-90% of the budget) is for wages and benefits. Volunteer departments usually expend the major portion of their operating costs on vehicle operating expenses, consumable medical supplies, and facilities expense (rent, repairs, etc.). You may wish to refer to the glossary at the end of this unit for information on other business terms.

FUNDING OPTIONS

In the "good old days" the Chief received his budget in a lump sum (i.e., he received and expended the lump sum which was usually the sole source of funding). Volunteer departments, however, often raised funds beyond what they initially budgeted. Their techniques for raising funds were consistently more innovative than career departments. It is time for career and volunteer agencies to closely examine their current funding policies and consider what options are available. Several types of budgets are listed at the end of this unit.

Beyond the departmental budget, there are several possibilities for obtaining supplemental funds:

1. DONATIONS/SERVICES-IN-KIND

   Donations and services-in-kind provide volunteer agencies with a large portion of their funds. Career departments could also attract donations if they would establish a separate nonprofit corporation to receive and disburse funds. For example, a nonprofit association of paramedics could solicit funds for the purchase of EMS equipment.

2. GRANT MONEY

Grant money has been a constant source of EMS supplemental funds for years. It is important, however, to avoid dependence on grants since they are usually for start-up funds rather than ongoing funds.

3. SPECIAL TAX REVENUES

An additional area of funding now being used more fully is special tax revenues. For example, Safety Harbor, Florida, now has a public safety impact fee. As homeowners move into that jurisdiction, they are assessed a one-time fee to offset the jurisdiction's expenses in providing police and fire protection.

4. STATE ASSISTANCE

State assistance in the form of money grants as well as equipment also helps to stretch departmental funds. In Virginia, for example, EMS agencies can request, via the Rescue Squad Assistance Act, grants for virtually any item of EMS equipment. The state also distributes free medical antishock trousers to EMS agencies through a highway safety grant.

5. FEE FOR SERVICE

Fee-for-service programs have several different options. The jurisdiction can directly reimburse the EMS agency for the total number of calls/runs of that agency. This is usually based on an agreed upon formula ($50 per run for example) and is in addition to the budgeted monies. Another option is for the department to bill the patient for services rendered. Medicare, Part B, also allows payments for emergency ambulance services. However, volunteer agencies should obtain legal advice to determine if these types of billing arrangements jeopordize their "good samaritan" status.

6. COMMUNITY FUNDRAISING

Another option is community fundraising. The traditional community fundraiser has been either bingo or some type of dinner. Departments using these fundraisers should determine if the return on their investment makes the event productive or counter-productive.

Any planned community fundraiser should be closely scrutinized to determine not only if a profit will be made but what the public relations impact will be. Also whenever money changes hands, special precautions are needed to insure safekeeping of those hard-earned dollars.

COMPUTERS

Many departments are initiating financial management systems based on computerized methods. Electronic spreadsheets, data base management, and calculations software (such as VisiCalc) are considered future trends. Computers will not, of themselves, manage your department. They can provide you with valuable information, save you considerable time, and show patterns which have management implications. Training is available from the National Fire Academy in "The Use of Microcomputers for Fire Service Management," a 2-week resident course.

SUMMARY

Note that financial management is an ongoing process; rather than a specific task which is accomplished in days or weeks.

The department must analyze its total operation to determine how it can be more cost effective.

GLOSSARY OF BUSINESS TERMS

Account	A record of a business transaction. See definition of "document" in legal concepts unit.
Asset	Anything of worth owned by the department--for example, stations, ambulances, radios, etc.
Balance	The amount of money remaining in your budget. Another meaning for this word is when calculations of credits and debits are equal.
Contract	An agreement regarding mutual responsibilities between parties.
Debit	An item of debt in business records. When debts are recorded (subtracted), a debit occurs.
Depreciation	A decrease in value due to age, deterioration, or wear. All departmental capital equipment can be depreciated over time.
Financial Statement	A record of total assets and liabilities.
Interest	The cost of borrowing money.
Inventory	A list of current departmental assets.
Liability	Debts or that which is owed.
Nonrecurring	One-time expenses usually associated with starting a particular level of service. For example, changing from BLS to ALS will involve certain nonrecurring expenses.
Posting	The act of entering figures into an account book or "ledger."
Statistics	A collection of accurate numerical data.

TYPES OF BUDGETS

1. Lump Sum

   Monies allocated to requesting department in "lump sum," expended in the absence of budgetary controls.

2. Line Item

   Listing of items of purchase or acquisition by department, agency, and organizational unit.

3. Performance Budget

   Standards of performance are set for each organizational unit. Compliance is measured against those standards. The standards as units of work are divided by the dollars allocated and a unit cost is derived. The goal is to reduce or hold steady the unit cost.

4. Classical Program Budget

   Line items are reduced or abandoned. Appropriations are by organizational unit and are determined by supervisorial responsibility.

   Appropriations are made by lump-sum major objects (personal services, service and supplies, capital outlays, etc.)

5. Pure Program Budget

   All costs are summarized in each program. True cost of any service level change is fully known.

6. Planning-Programming Budget Systems (PPRS)

   Programs are identified and objectives set. Alternative routes to reaching goals are catalogued. A cost-benefit study is made of each alternative and the most cost beneficial alternative is adopted and a multiyear plan is derived.

7. Integrated Budgeting System (IBS)

   An electic approach to governmental budgeting--essentially a line item budget, but computer driven.

8. Zero Base

   Identifies decision units (programs) within the jurisdiction. Analyzes each decision unit in a decision package and evaluates and rank orders all decision packages. The budget is prepared on the basis of approved decision packages.

Decision Packages

a. Statement of purpose and objective.
b. Description of actions proposed.
c. Costs/benefits of package and proposed actions.
d. Workload and performance measures.
e. Alternative means of accomplishing objectives.
f. Various levels of effort.

Alternatives and levels of effort (service levels) are then analyzed, costed, and ranked by utilization of the following basic levels:

(1) Program elimination.
(2) Reduce level of service of activity.
(3) Current level maintained.
(4) Increase level of effort.

INCREASES AND DECREASES are set in percentages, 10% up, 10% down (etc.), or reflected in service level changes.