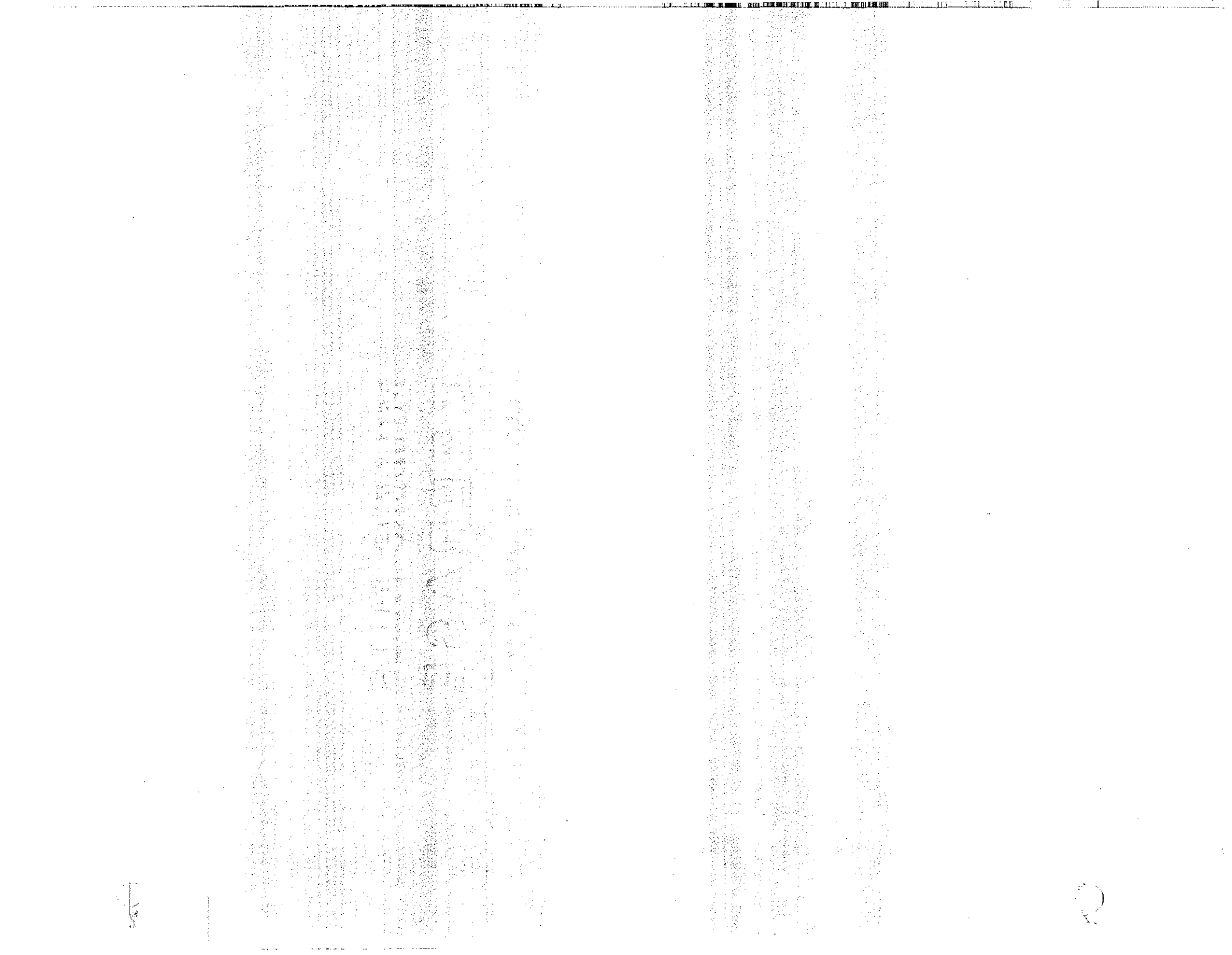

HISTORY AND DEVELOPMENT OF THE EMERGENCY MEDICAL TECHNICIAN PROGRAM AND SUGGESTED DIPLOMA CURRICULUM

Report of
An Action Learning Project
Presented to

The Graduate Faculty of the College of Education

University of Wisconsin - La Crosse

In Partial Fulfillment
of the Requirement for the Degree
Master of Education Professional Development

Division of Education

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by

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August, 1978

UNIVERSITY OF WISCONSIN - LA CROSSE

COLLEGE OF EDUCATION

Candidate: William C. Gaumer

I recommend acceptance of this action learning project report to the College of Education in partial fulfillment of this candidate's requirements for the degree Master of Education - Professional Development. The candidate has completed his oral seminar report.

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July 31, 1978
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ABSTRACT

Gaumer, William C. History and Development of the Emergency Medical Technician Program and Suggested Diploma Curriculum. Master of Education - Professional Development, 1978 115 p. (Dr. Earl Munns)

Statement of the Problem

The purpose of this project was:

(I) To trace the development of Emergency Medical Technician (EMT) training in the nation, state, and Western Wisconsin vocational district.

(II) To determine the need for expanding the educational options for EMT students.

(III) To develop a suggested diploma level curriculum for the career-minded EMT student.

Procedure Used

Through a review of related literature and from personal experience, the development and history of EMT training is traced from the passage of the Highway Safety Act of 1966 to the present. This development is examined on a national level, a State of Wisconsin level and within the district boundaries of Western Wisconsin Technical Institute (WWTI).

The need for expanding the educational program for EMT students and certified EMT's was explored. A survey

questionnaire was sent to 180 certified EMT's, eight emergency physicians and 22 emergency department registered nurses. The survey was intended to assess the opinion of the group in regard to the development and implementation of a pre-service, diploma level program for the beginning EMT and the implementation of advanced skill modules for the certified EMT.

According to the final tabulation of the survey responses, the group favored implementation of advanced skill training in a modular format.

Conclusion

The results of this project and its recommendations will be presented to the Division Chairman of the Health Occupations Division at WWTI and to the Emergency Medical Services Consultant of the Wisconsin Board of Vocational, Technical and Adult Education. It is hoped the diploma curriculum and advanced training can be implemented soon.

ACKNOWLEDGEMENTS

I wish to dedicate this paper and all the hours of work that went into it to several people who have played important roles in my life.

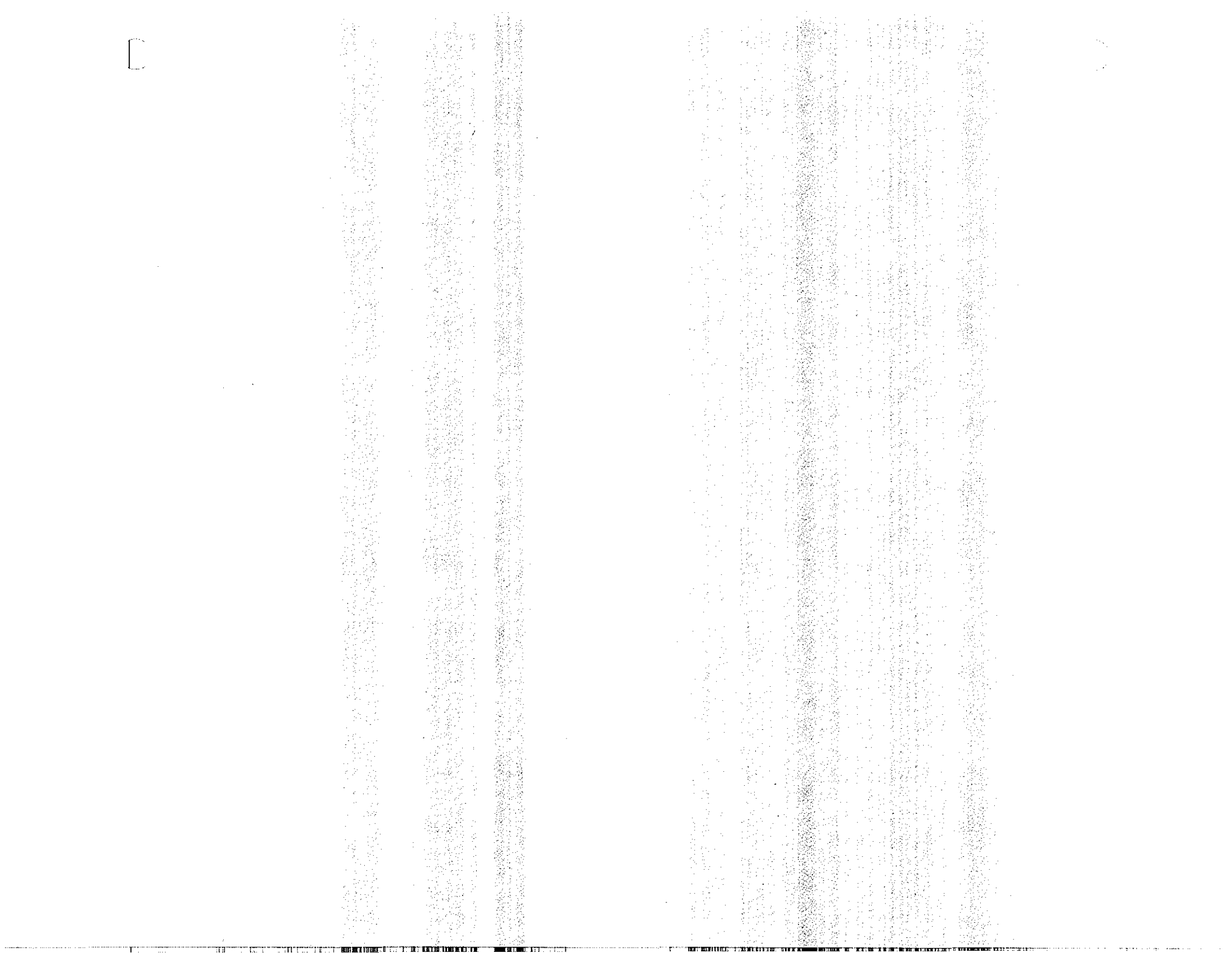
To Jeannie, Lynne, Amy, and Daniel, my children who give me support with their unquestioning love.

To Sister Rose Schapman, who has been an inspiration to me for years.

To my immediate supervisor, Anita G. Smith, who has been very understanding and supportive in times of need.

To my project advisors, especially Dr. Earl Munns.

To all my family members from whom I draw emotional support.



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CHAPTER 1

INTRODUCTION

Background

History

The medical training of ambulance attendants is an educational endeavor which is surprisingly new. One would think these people, who are caring for the sick and injured, would be highly skilled in emergency medical techniques. Unfortunately, uncounted hundreds have died due to the almost universal lack of medical training. Since the inception of the ambulance until 1966, the general philosophy of ambulance services was to get the victim to the doctor as fast as possible. The underlying idea being that the only place a trained person could be found was at the hospital. With that being the case then, it made sense that the victim must get to the hospital in a hurry so he could be treated while he was still alive. Unfortunately, the patient was frequently no longer alive upon arrival at the emergency department. In addition, the ambulance services had a very high accident rate due to excessive speed. There was no regulation of ambulance attendants at that time, leading to the use of "off the street" employment practices.

It seems strange, indeed, that states would require licensure and regulation of people in occupations such as

bartending, hair dressing, and taxi cab driving, but not in the operation of an ambulance service. With this apathetic attitude prevalent in government and public minds, it is little wonder that the "load and go" or "you call, we haul" philosophy of ambulance service thrived for so many years.

National Highway Safety Act. In 1966, the 89th U.S. Congress passed landmark legislation which started a rapid evolution in the delivery of emergency medical care. The National Highway Safety Act set forth 18 standards which each state was to conform to within a given timetable, and funding for meeting the standards was also appropriated. Standard Eleven deals with emergency medical services. This standard called for a comprehensive emergency medical services system within each state. Such a system would involve many factors including: categorization of existing medical facilities, training of emergency medical technicians and others, funding ambulance vehicles, setting boundaries for ambulance services, disaster planning and a variety of other things all of which have a common purpose; that is, to provide the highest quality of emergency care to every citizen regardless of where in the nation he happens to be.

Prior to the National Highway Safety Act, some states and municipalities had legislation or ordinances which were feeble attempts at regulating ambulance services. None required more than first aid training for ambulance attendants

and exceedingly few regulations were enforced to any degree. In addition, all exempted municipally owned ambulance services from compliance.

The National Highway Safety Act made provision for funding the development of a standardized curriculum for the training of Emergency Medical Technicians (EMT). Dunlap and Associates of Darien, Conn. were contracted by the Department of Transportation to develop this first standardized training course for ambulance attendants in the United States. The original course was eighty-one hours in length, including six hours of in-hospital experience. The program was an inservice type of program for existing ambulance attendants. It was never intended to be the terminal course for ambulance attendants, but only a stop gap measure to bring ambulance personnel up to a common minimum point. Many people made the mistake of thinking the basic eighty-one hour course was all the training they would ever need.

The basic eighty-one hour course has been revised by many states and expanded upon, although it is still considered the minimum course of training acceptable for ambulance attendants. (Appendix A)

Wisconsin EMS Program. The total EMS system development process was coordinated through the Office of Highway Safety with the grass roots efforts being initiated in areawide health planning agencies. Each health planning agency

established an Emergency Medical Services Committee with fifty-one percent consumer representation. This committee was advised by similar committees on the county level. It was the task of the areawide EMS committees to determine the EMS needs in their respective areas and make plans for meeting identified areas of need. Moreover, it was their task to establish a comprehensive areawide EMS plan to be reviewed and approved by the health planning agency board of their area. The EMS committees also reviewed and commented upon any federal grant requests dealing with emergency medical services.

As areawide EMS plans were established, they were submitted to the Office of Highway Safety for approval and for inclusion in a statewide EMS plan.

Even though comprehensive plans have been established, not every facet of every plan has been implemented. For example, the universal emergency phone number, 911, has been implemented in only six counties in Wisconsin. Also, first responder training has been initiated only sporadically. These deficiencies and others will be corrected; however, the economic factor must be contended with.

The most successful portion of the EMS plan has been the training of Emergency Medical Technicians. Emergency Medical Technician training courses were started in Wisconsin in 1969. The responsibility for implementation was placed with the Wisconsin Department of Health and Social Services,

Division of Health, Emergency Health Services Section. Ironically enough, the first two classes in the state were held within the boundaries of Western Wisconsin Technical Institute's ten-county district. The EHS section deviated slightly from the original Dunlap course in its presentation and eliminated the six hours of in-hospital experience. (Appendix B) The EHS section was based in Madison and sent instructor/coordinators around the state presenting the twenty-five, three-hour lessons in various locations. Through this system, approximately 4500 EMT's were trained. In 1975, the responsibility for EMT training was turned over to the Wisconsin Vocational, Technical, and Adult Education system for reasons of logistic simplification, duplication of resources, lack of funding for the EHS section and legislative mandate.

Chapter 321, Laws of 1973, State of Wisconsin (Appendix C) demands that several crucial points in EMS be met and set deadlines for them. Those points enumerated are:

1. Licensure of ambulance attendants
2. Training of ambulance attendants
3. Licensure of ambulance service providers
4. Vehicle specifications
5. Establishment of areaswide EMS plans
6. Placing responsibility for EMT training in the VTAE system
7. Establishment of an EMS Examining Council

The Chapter allows those people who were active as ambulance attendants on December 31, 1974, the effective date of the legislation, to be issued a provisional ambulance attendant

license which could be renewed twice without training. One more year has been allowed by recent amendment. The Chapter also specifies that the VTAE system be charged with the responsibility of providing EMS training courses. The VTAE system has been providing EMT training since 1974 although only within the past six months, has it been allowed to take over the full responsibility for EMT training. The Vo-Tech schools have trained about 3500 EMT's to date. Related courses are constantly being developed to provide training for all aspectsin a total EMS system. Some of those courses are:

1. Central Medical Emergency Dispatcher (Appendix D)
2. Trauma Management (Appendix E)
3. Vehicular Extrication (Appendix F)
4. EMT Refresher Training (Appendix G)

Some Vo-Tech districts are also providing paramedic training courses.

Western Wisconsin EMS development. The job of development of an emergency medical services system for the western part of the state was placed with the Western Wisconsin Health Planning Organization (WWHPO), the comprehensive health planning agency for a ten-county area. The WWHPO Board of Directors set up an areawide EMS Committee which had consumer and provider representation from all counties involved. The committee had to address three questions in relation to EMS, "what point are we at now, where do we want to go, and how shall we get to that end point." In determining the existing level of emergency care capability, the committee found it necessary

to do an intensive on-site survey of hospital emergency departments and ambulance services in the area. It endeavored to assess capability based on these factors:

1. Manpower
2. Levels of training
3. Staffing patterns
4. Equipment
5. Supplies
6. Support services and their availability
7. Population served
8. Geographical area served
9. Total resource availability
10. Mutual aid agreements
11. Duplication of resources
12. Regional support facilities
13. Communications

These categories of assessment were applied to ambulance services and hospitals. At the conclusion of the survey process, it was much easier to make a total assessment based on need rather than speculation. On the basis of the original survey, the EMS Committee could determine where we were, where we should go, and how we could get there. The Committee could not determine an EMS plan based on need and could refer to the EMS survey and plan when reviewing grant applications and proposed changes in agencies or services involved in EMS. Another major endeavor of the Committee was to develop standards for EMS providers. These standards are to be met or exceeded by the providers, and are considered when grant applications are reviewed. (Appendix H)

EMT Training in Western Wisconsin. Several basic EMT training classes were held by the EHS section in the Western

Wisconsin Technical Institute District prior to the school's entry into EMT training. These were held in Black River Falls, Kendall, La Crosse, Arcadia, and one class which alternated between Tomah, Sparta and Black River Falls. WWTI began it's EMT program in early 1974. The program faculty has been very active in improving the EMT program. The course has been presented in all areas of the district and has met with widespread acceptance. (Appendix I) Presently the EMT course is 90 hours in length, not including the 12-hour clinical component or the National Registration Examination. (Appendix J) Other changes in the curriculum have been suggested to the EHS section but have been rejected. The most notable was an increase to 120 hours of instruction. The course remains in an extension format and as an inservice course for employed ambulance attendants and hospital emergency department personnel.

STATEMENT OF THE PROBLEM

Preservice Versus Inservice

When EMT training was started, the course of instruction was short and was intended to bring untrained but employed ambulance attendants up to a minimal acceptable level of training. The course was constructed so that it would be easily presented in an inservice format. What many officials have failed to realize is that at this point in time, many areas no longer have the backlog of untrained ambulance attendants. Such is the case in the WWTI district. There is no longer

any reason to require that students be employed as ambulance attendants as a prerequisite to admission to the course. The course should now be changed from an inservice program to a preservice program. Ambulance attendants should be required to become EMT's before employment. It seems ludicrious and outdated to put untrained people in an ambulance in order to get them into a training course. This situation has occurred in the WWTI district and as a result, has cost the lives of patients. It certainly no longer makes sense to require employment before training.

Appropriate Educational Level

It is becoming increasingly apparent that the extension format is adequate for some students, but falls far short of the academic needs of others. The extension format must be retained to serve the people who do not have an ambulance service as a primary means of support. The volunteer ambulance attendant is in this type of a situation. He is willing to meet the training requirements, however, he does have another occupation which he must devote his time to. Volunteers are the essence of most rural ambulance services and are to be commended for their dedication and willingness to serve their communities. But what of the individual who wishes to make a full-time career in ambulance work? How far can he expect to proceed with a 90-hour course of instruction? This student should have a higher level of education open to him if

he so desires it. He should be able to enroll in a diploma program or even perhaps an associate degree program. Just because the EMT course has been given as an inservice extension does not mean that it cannot be changed to a preservice diploma program. As stated earlier, the original EMT course was meant only as a stop-gap measure, a beginning points. It is recognized that the extension 90-hour course is too short and barely teaches the basics necessary to be competent ambulance attendant.

NEED FOR THE PROJECT

The Emergency Medical Technicians of this country are very proud of their skills and consider themselves a new health care profession. It is difficult for other medical professionals to accept someone with 90 hours of training as part of the health care team. Further, it is not realistic to expect more than a minimum wage after so short a course. If EMT's are going to be a critical link in the chain of emergency medical services, then they must have more educational resources available to them. They must be able to make a choice as to their entry point and their exit point in the career ladder. They must not be restricted to the present minimal 90 hour inservice course. As the EMT becomes more knowledgeable through education, he will be better able to make the judgments necessary in intensive patient care situations.

PURPOSE

In consonance with the demonstrable need for alternative educational programs for EMT's, it is the purpose of this project to establish a diploma level curriculum as an entry level program for the preparation of students seeking a full-time career as ambulance attendants. The proposed curriculum will be presented to the Administration of WWTI and the Wisconsin Board of VTAE. It is important to note that no Vo-Tech district in Wisconsin offers a full time program for the EMT student.

DEFINITIONS OF TERMS

Ambulance Attendant - a person who has the responsibility of giving care to the victim of an accident or illness at the scene of the incident and while en route to a hospital via ambulance.

Certificate Course - a course of instruction being less than one year in length and not being a diploma course.

Diploma Program - a course of instruction usually one to two years long and not leading to an associate degree.

Extension Course - a course of instruction which is not a full time program, usually presented one night a week.

First responder - a person who is routinely first at the scene of an accident or illness.

Inservice - a course given after the student is employed.

Paramedic - an EMT with advanced training and skills and increased expertise in coronary care.

Preservice - a course of instruction before employment which prepares the student for his career field.

Vo-Tech - an abbreviation for the Vocational, Technical and Adult Education system.

VTAE system - same as Vo-Tech.

CHAPTER II

REVIEW OF RELATED LITERATURE

Increasing numbers of locales within the United States are reaching high levels of expertise in providing emergency medical services, but in a great many communities, the Emergency Medical Service is in a miserable state of affairs. However, without question, if the current rate of enthusiasm and interest continues, the nation can have a superb Emergency Medical Service system. The ingenuity of the people of this country appears boundless, and while it may take time to realize that there is a great need for improvement in this area, dedication to meeting the needs of all citizens suffering from injury or sudden illness can provide the best Emergency Medical Service system in the world.

Rockwood, et al (1976), accurately stresses that until the late nineteen-sixties, very few cities provided adequate emergency medical services. Most consisted of a large number of uncoordinated, competitive, commercial and municipal ambulance services which responded to all types of calls, including emergency. Ambulance crews offered little or no real life-saving care; their primary function was to speed to the scene of the accident, load the victim, and speed to the hospital. In many cases, only a driver made the emergency run; no one else was with the patient in the ambulance. Little more than

a litter, a first aid kit, and an oxygen tank were carried in the ambulance. Radios were present in some vehicles, but their main use was to monitor police calls so that an ambulance might arrive at an accident before any competitor.

Tragically, some of the types of services just described still exist today. In some cities, animals receive better emergency care than citizens, in that radio dispatched vehicles with well trained personnel are available for emergency calls for pets. (Paramedical Journal, 1971)

It is currently estimated by the National Highway Traffic Safety Administration (NHTSA) that only 30 to 35% of the communities in the United States have what is considered adequate emergency medical services. This is a healthy and promising increase over percentages of even 2 to 3 years ago, yet our national accident death rate, although slightly reduced in 1974, was still over 100,000 for that year. (Rockwood et. al., 1976)

Organized medicine has undoubtedly been a major stimulus in improving emergency medical care. The American College of Surgeon's Committee on Trauma, established in 1922, has been dedicated to improving trauma care delivery. Before 1960, American College of Surgeon's regional committees provided numerous courses for ambulance attendants, and, in 1957, these committees initiated a series of annual trauma courses for physicians. (Hampton, 1972) Other contributions included the publication of "Essential Equipment for Ambulances," which

became a nationally accepted standard. (American College of Surgeons, 1970) The American College of Surgeons also developed training programs for emergency medical technicians, films, publications, slide sets, etc., for upgrading emergency medical care.

Probably one of the single most provoking stimuli to improve emergency medical services was the 1966 publication of Accidental Death and Disability; The Neglected Disease of Modern Society by the Division of Medical Sciences, National Academy of Sciences/National Research Council, which explicitly outlines the severity of the situation. It stressed the difference competent initial emergency medical care, efficient transportation, and active treatment could make in survival rates among the critically injured.

A 1965 report from the President's Commission on Highway Safety (established in 1946) proffered emergency medical care and transportation of the sick and injured as one of its community action programs, resulting in inclusion of Emergency Medical Services at Standard 11 of the 18 in the Highway Safety Act of 1966. States were directed to develop an effective emergency medical services program covering the eight elements of Standard 11 or be subject to loss of up to 10% of their federal highway construction funds. The program was administered by the Secretary of Transportation and involved the United States Department of Transportation -

National Highway Traffic Safety Administration (DOT-NHTSA) which published guidelines for implementation of Standard 11 in its Highway Safety Program Manual, Volume 11, Emergency Medical Services early in 1969 and supplemented in 1971.

Thirty-five states now have legislation providing for regulation of ambulance service operations, and 20 of these states also have regulations covering advanced emergency care techniques carried out by Emergency Medical Technicians under physician direction. The efforts of the DOT-NHTSA have been, and still are, a major contribution in improving emergency medical services in the United States. (Rockwood et. al., 1976)

From the innovative mind of Walter A. Hoyt Jr., M.D., then Chairman of the Committee on Injuries of the American Academy of Orthopedic Surgeons, work was initiated in 1967 to develop a comprehensive text to be used in emergency medical care courses. Emergency Care and Transportation of the Sick and Injured, has become a standard text for many of the nation's ambulance and rescue training courses. Its contributors encompass The American College of Surgeons, The American Academy of Orthopedic Surgeons, The American Medical Association, The American National Red Cross, The Department of Transportation, The United States Public Health Service, The National Academy of Sciences/National Research Council, The United States Army Medical Corps, and many others.

In 1969, the DOT-NHTSA awarded Dunlap and Associates, Darien, Connecticut, a contract to develop a standardized course of instruction based on the recommendations in Training of Ambulance Personnel and Others Responsible for Emergency Care of the Sick and Injured at the Scene and During Transport produced in 1968 by a special Task Force of the Committee on Emergency Medical Services of the NAC/NRC. Using the preliminary draft of the AAOS emergency care text and working with a number of knowledgeable people, the contractor devised and tested one of the first comprehensive courses of instruction designed specifically for ambulance services. The final product included a course package under the title, NHTSA Basic Training Program for Emergency Medical Technician - Ambulance, which consisted of Instructors Lesson Plans, a Course Guide and Course Coordinator Orientation Program and Concepts and Recommendations.

A number of other emergency care texts and training packets were produced in the period 1969-1972. Emergency Victim Care, from the Ohio Trade and Industrical Education Service, Columbus and Emergency Care, published by the Robert J. Brady Company were among those released in 1971 which received wide attention.

Ambulance Design Criteria, prepared in 1969 as a report to DOT-NHTSA by the Committee on Ambulance Design Criteria, was designed to complement the NAS/NRC's Medical

Requirements for Ambulance Design and Equipment published in 1968. This document recommends design standards including size, shape, color, ground clearance capability, electrical systems, environmental controls, emergency equipment, etc. It outlines the specific requirements of all components and is a perfect guideline for use in the design, planning, and development of vehicles to be used in an emergency medical service. The ambulance industry is to be commended in that the majority of providers are now building vehicles according to these criteria. The NHTSA has been a primary instigator in bringing this change about, first making it mandatory that matching federal funds were expended only for vehicles meeting design criteria and subsequently, with the General Services Administration, developing Federal specifications applicable to all Federal procurements, leases, and State implementation of Standard 11. (GSA; 1974)

Frequent meetings and conferences during the period of 1966-1977 contributed to a growing national awareness of profound problems inherent in existing emergency medical care. On January 20, 1972, in his State of the Union Message, President Nixon directed the Department of Health, Education, and Welfare to develop new ways to organize emergency medical services. Health, Education, and Welfare moved quickly, and within the same year it was announced that $8.5 million in contracts had been awarded to five areas for development of

model emergency medical service systems. Congressional action over the next year and a half resulted in the Emergency Medical Systems Act of 1973 (P.L. 93-154), which created a new emergency medical services program in Health, Education and Welfare. The Act amended the Public Health Service Act of 1944 by adding a new Title XII - Emergency Medical Services to "provide assistance and encouragement for the development of comprehensive area emergency medical services systems." (Laws of 93rd Congress - 1973) Western Wisconsin Technical Institute has been awarded two training grants under this act for development and continuation of training programs for emergency medical service personnel.

Whether emergency medical technicians function in hospitals, within municipal government, as volunteers, or in private ambulance services, the training offered to emergency medical technicians will be essentially the same, varying only in levels of expertise. It is hoped that the time will come when, nationally and in each community, emergency medical technicians will be recognized on a career status level comparable to those in the fire or police departments or the nurses and technicians in hospital emergency departments. (Rockwood et. al., 1976)

Much has been accomplished; much still needs to be done. Nationwide, emergency medical service remains one of the weakest links in the delivery of health care. Local

governments must accept responsibility for providing emergency medical services as they do fire, police, and other health services. The greatest threat to the average citizen in his own community today is not a fire in the home or a criminal in the street. The greatest threat is an inability to obtain adequate emergency medical care at the time of need - when knowledge, skill, and minutes can save lives. (Rockwood et. al., 1976)

CHAPTER III

METHODS

Introduction

A great deal of effort has been expended by the staff of the Western Wisconsin Technical Institute Emergency Medical Technician program in the development and frequent revision of the program. The current program is considered to be the most progressive in the State by many informed persons. In spite of this, the staff felt it was not yet meeting the educational needs of the Emergency Medical Technician. It was determined that through this project, an opportunity to more accurately assess the needs of existing Emergency Medical Technicians would occur and an attempt to extrapolate their feelings to a prospective or potential student population would be made available.

Procedure

Several means were employed to help assess the need for a preservice diploma program for basic Emergency Medical Technician students. The original method was also the least scientific and the most subjective. Simply put, it appeared that the Emergency Medical Technician who has great patient care responsibilities needs more background and judgment-making ability than he now gets in the 90 hour course.

CHAPTER IV

Results and Discussion

Activities and Procedures

A survey form was distributed to 180 EMT's, eight physicians and 22 registered nurses. Surveys were returned by 65 EMT's (36%), four physicians (50%) and 13 registered nurses (59%). The main purpose of the survey was to assess the educational needs of the EMT in the WWTI district with particular emphasis on a diploma level program and advanced skill modules. The surveys were tabulated and the resulting tabulation is found in Appendix M of this paper.

Results

Survey Results

For ease of clarification, the EMT survey will be discussed separately from the physician and nurse survey.

EMT Survey

According to the survey, the mean age of EMT's in the WWTI district is 35 years. The average length of service as an EMT is three years and one month. The mean educational level of EMT's is 13.75 years. A survey breakdown by employment status reveals seven full-time EMT's (10.8%), 14 part-time EMT's (21.5%), 30 paid volunteers (46.2%) and 14 unpaid

volunteers (21.5%). Of the 65 respondents, 95.4% felt their basic EMT training was adequate to meet their needs. When asked if they felt a diploma level program should be offered in the WWTI district, 56.9% replied yes with 43.1% replying in the negative. The main objection to offering a diploma curriculum was a concern about the lack of employment in the immediate area for graduates of such a program. The respondents apparently failed to think beyond the scope of the WWTI district when voicing this objection. There is employment opportunity in larger communities for professional EMT's. In fact, if the current trends continue, we will be finding small communities hiring professional EMT's just as they hire professional police protection. When asked if they wanted the present extension course continued even if the diploma program were offered, 98.5% replied in the affirmative. This is undoubtedly due to the preponderance of volunteer ambulance services in the WWTI district. The question asking whether the respondent would partake of advanced skill training in a modular format was very indicative of a district wide desire for such training. Very few did not favor such training. The great majority wanted at least some of the modules and most wanted all the modules presented. The priority ranking is indicated on the tabulated form in Appendix M. The remaining three questions are compiled in Appendix M and were asked primarily to see what the EMT's would like offered in seminar format for their continuing education requirements.

Physician and Nurse Survey

All 17 of the respondents have frequent professional contact with EMT's and understand the role and responsibilities of the EMT. All but one are satisfied with the treatment EMT's render patients. Only 70.6% feel the present training program is adequate. 88.2% of the respondents favor offering a diploma level program to EMT students. The two dissenters, were, again, concerned about employment opportunities for the graduates. Of the 17 respondents, only 52.9% wish to see the present extension program continued if a diploma program is implemented. Fourteen professionals (82.4%) are in favor of starting the 750-hour paramedic training program in this district. 76.5% of the respondents also favored the modular approach to advanced skill training. The numbers listed adjacent to the modular courses on the tabulated form in Appendix M indicate the number of positive responses for each module.

Evaluation

It is abundantly clear the advanced skill modules, if offered, would be highly popular and would also be accepted by the emergency department physicians and nurses. The three most popular modules should be developed and implemented as soon as possible. Those three, in order of composite ranking by EMT's, are cardiovascular problems, respiratory problems and shock and fluid therapy.

It is less clear regarding the implementation of the diploma level EMT curriculum. It is felt that the number of positive responses would have been much higher had the respondents not limited the employment opportunities to the immediate time and geographical area. As it was, the majority still favor the implementation of a diploma level pre-service curriculum for the Basic EMT student.

Diploma Curriculum

The following curriculum is presented based on the professional and academic needs of the student and on the guidelines of WWTI.

Course Number and Course	Theory Hours	Lab. Hours	Clinical Lab. Hours	Clock Hours	Credit Hours
First Term					
8-01-333 - Applied Oral Communications	3	0	0	3	2
8-09-329 - Understanding Human Behavior	3	0	0	3	2
5-09-300 - Basic Health Science	3	2	0	5	3
8-12-315 - Emergency Vehicle Driving	2	0	0	2	1
5-30-311 - Medical Terminology	3	0	0	3	2
5-31-311 - Introduction to Emergency Medical Techniques	2	6	4	12	6
				28	16
Second Term					
8-01-332 - Applied Written Communications	3	0	0	3	2
8-09-303 - Applied Economics	2	0	0	2	1
5-30-322 - Medical Terminology	3	0	0	3	2
5-31-321 - Central Medical Emergency Dispatcher Training	2	0	0	2	1
5-31-322 - Emergency Medical Techniques	2	4	12	18	9
				28	15

This curriculum would provide the student with a good academic background, good general medical background and an opportunity to gain very extensive training in emergency medical techniques before having direct patient care responsibilities. This is a vast improvement over the present training program and should be offered to the career minded EMT who needs more than an 81-hour course as his basic preparation.

CHAPTER V

Conclusions

Summary

J.D. Farrington, M.D. (1972, p. 5) has stated that in the future "the stature of the emergency medical technician will be improved and the possibility of advancement increased." He further states,

> The ambulance service field should attract more career-minded individuals, particularly the former medical corpsmen with field experience in the armed services, who in the past have been absorbed by industry. The ambulance services of the country are a vital part of the emergency medical service system and are, in reality, an arm of the hospital emergency department extended to the critically ill and injured. (Farrington, 1972, p. 5)

The author heartily concurs with Dr. Farrington and hastens to add that it is not realistic to consider an 81-hour training course as the basic preparation for a career-minded individual.

This project has traced the development and history of the emergency medical technician training program on a national, state and local perspective. Further, it has shown that a preservice diploma level program should be offered to the career-minded ambulance attendant. However, it is pointed out, the extension format must be retained due to the large reliance of rural ambulance services on volunteers

who cannot take time from their primary occupation to go to school full time.

Recommendations

Western Wisconsin Technical Institute should continue to offer a variety of courses in emergency medical services to meet the needs of the district.

Western Wisconsin Technical Institute should continue to offer an aggressive continuing education program for basic emergency medical technicians and explore the possibility of advanced skill modular style courses.

The Western Wisconsin Technical Institute Emergency Medical Technician program should implement a full time, diploma level program for the career-minded emergency medical technician student. The extension course would have to remain for the volunteer ambulance attendants.

REFERENCES CITED

American Academy of Orthopaedic Surgeons, Committee on Injuries: Emergency Care and Transportation of the Sick and Injured. Chicago, AAOS, 1977.

American College of Surgeons: Essential equipment for ambulances. Bull Am Coll Surg 55:7-13, 1970.

Division of Medical Sciences: Accidental Death and Disability: The Neglected Disease of Modern Society. Washington, D. C., National Academy of Sciences/National Research Council, 1966.

Division of Medical Sciences. Committee on Emergency Medical Services: Training of Ambulance Personnel and Others Responsible for Emergency Care of the Sick and Injured at the Scene and During Transport. Washington, D. C., National Academy of Sciences/National Research Council, 1968.

Farrington, J. D.: The registry of ambulance attendants. Emergency Medicine Today. American Medical Assocation. Vol. 1, No. 1, 1972.

General Services Administration in Collaboration with National Highway Traffic Safety Administration: Federal Specifications for the Emergency Medical Care Vehicle-Ambulance, (65A-KKR-1822), January, 1974.

Grant, H., Murray, R: Emergency Care. Bowie, Maryland, Robert J. Brady Company, 1971.

Hampton, OP Jr: The Committee on Trauma of the American College of Surgeons. Bull Am Coll Surg 57:7-12, 1972.

Last service is first recourse. Para-Medical Journal 3:4, 9. (Winter), 1971 (Reprinted from: International Trail. Vol. 40. No. 2, 1971).

Laws of 93rd Congress - 1st Session: Emergency Medical Services System Act of 1973, Public Law 93-154, 87 Stat. 594. Washington, D. C., November 16, 1973.

National Academy of Engineering. Committee on Ambulance Design Criteria: Ambulance Design Criteria. A report to the National Highway Traffic Safety Bureau of the Federal Highway Administration, Washington, D. C., U. S. Department of Transportation, June 30, 1969.

National Academy of Sciences. Medical Requirements for Ambulance Design and Equipment. Washington, D. C., Department of Health, Education and Welfare, 1974.

Ohio Trade and Industrial Education Service: Emergency Victim Care. Columbus, Ohio State University, 1971.

Rockwood, C. A. et. al., "History of Emergency Medical Services in the United States", The Journal of Trauma, Vol. 16. No. 4, 1976.

U. S. Department of Transportation: Basic Training Program for Emergency Medical Technicians-Ambulance, Concepts and Recommendations. Washington, D. C., National Highway Traffic Safety Administration, January, 1971.

U. S. Department of Transportation: Basic Training Program for Emergency Medical Technicians-Ambulance, Course Guide and Course Coordinator Orientation Program. Washington, D. C., National Highway Traffic Safety Administration, January, 1971.

U. S. Department of Transportation: Basic Training Program for Emergency Medical Technicians-Ambulance, Instructor's Lesson Plans. Washington, D. C., National Highway Traffic Safety Administration, January, 1971.

U. S. Department of Transportation: Highway Safety Program Manual, Emergency Medical Services, Supplement 1. Vol. 11. Washington, D. C., February, 1971.

U. S. Department of Transportation: Highway Safety Program Manual, Emergency Medical Services, Vol. 11. Washington, D. C., January, 1969.

APPENDIXES

APPENDIX A

ORIGINAL DUNLAP CURRICULUM

The total course consists of 25 lessons involving 71 hours of classroom training plus 10 hours of in-hospital observation and training for a total of 81 hours.

LESSON	TOPIC	TIME
1.	The emergency medical technician (EMT) - his role, responsibilities, and equipment.	3 hours
2.	Airway obstruction and pulmonary arrest.	3 hours
3.	Mechanical aids to breathing and pulmonary resuscitation.	3 hours
4.	Cardiac arrest.	3 hours
5.	Bleeding, shock and practice on airway care, pulmonary resuscitation and cardiopulmonary resuscitation.	3 hours
6.	Practice, test and evaluation - airway care, pulmonary arrest, cardiac arrest, bleeding, and shock.	3 hours
7.	Wounds.	3 hours
8.	Fractures of the upper extremity.	3 hours
9.	Fractures of the lower extremity.	2½ hours
10.	Injuries of the head, face, neck and spine.	3 hours
11.	Injuries to the eye, chest, abdomen, pelvis, genitalia.	3 hours
12.	Practice, test and evaluation - injuries I.	3 hours
13.	Practice, test and evaluation - injuries II.	2½ hours
14.	Medical emergencies - I.	3 hours
15.	Medical emergencies - II.	2 hours
16.	Childbirth and problems of child patients.	3 hours

Original Dunlap Curriculum
Page 2

LESSON	TOPIC	TIME
17.	Lifting and moving patients.	3 hours
18.	Practice, test and evaluation - medical emergencies, emergency childbirth, lifting and moving.	3 hours
19.	Environmental emergencies.	2½ hours
20.	Extrication from automobiles.	3 hours
21.	Operations - driving an emergency vehicle, maintaining a safe and ready vehicle, records and reports, communications, and procedures at hospital emergency rooms.	3 hours
22.	Responding to an ambulance call.	2½ hours
23.	Situational Review.	3 hours
24.	Final written test.	2 hours
25.	Final practical evaluation of skills.	3 hours

APPENDIX B

WISCONSIN DIVISION OF HEALTH

BASIC CURRICULUM DESCRIPTION

DATE	SESSION	TOPIC	CONTENT & OBJECTIVES
	1.	The EMT - His roles, responsibilities and equipment --- Instructor: EMS Staff	Introduction to course objectives, administrative procedures, scope of course & requirements for satisfactory completion. Overview of roles & responsibilities of EMT and the ambulance and its equipment.
	2.	Anatomy & Physiology I --- Instructor: M.D.	Introduction to Anatomy and Physiology: Skeletal System, Muscular System, Nervous System.
	3.	Anatomy & Physiology II --- Instructor: M.D.	Anatomy & Physiology of Respiratory System, Circulatory System & the Skin.
	4.	Anatomy & Physiology III Review, Questions & Answers, Evaluation --- Instructor: M.D. & EMS Staff	Anatomy & Physiology of Digestive System, Genitourinary System & Sense Organs. Review of Lessons 2 & 3. Question/Answer Session: Anatomy & Physiology Evaluation: 50 point written quiz
	5.	Life-Threatening Problem: Airway Obstruction --- Instructor: M.D.	Lecture: Proper and necessary methods for securing and maintaining a patent airway. Demonstration: Airway maintenance skills and equipment including AHA performance test for obstructed airway. Practice Session: Skills in airway maintenance including unconscious position, positioning of patient's head and neck, jaw thrust, chin lift, use of laryngoscope and McGill forceps, cricothyrotomy, proper use of suction equipment, use of oropharyngeal airways, practice in AHA performance test for obstructed airway.

DATE	SESSION	TOPIC	CONTENT & OBJECTIVES
	6.	Life-Threatening Problem: Pulmonary Arrest --- Instructor: M.D.	Lecture: Dealing with the recognition and treatment of pulmonary problems. Demonstration: Treatment and procedure to follow when dealing with pulmonary problems, use of O_2 equipment, use of bag-mask. Practice Session: Additional practice on securing and maintaining an airway and use of suction if necessary. Technique of adult mouth-to-mouth and mouth-to-nose resuscitation, infant mouth-to-mouth and nose resuscitation, use of bag-mask, handling of gastric insufflation and vomiting, use of O_2 equipment, mask and cannula.
	7.	Life-Threatening Problem: Cardiac Arrest --- Instructor: M.D.	Lecture: Dealing with the recognition of cardiac arrest and technique of cardio-pulmonary resuscitation. Demonstration: AHA performance tests for unwitnessed cardiac arrest, one and two rescuers, witnessed cardiac arrest, infant cardio-pulmonary resuscitation. Practice Session: AHA performance tests on Resusci-Anne and Resusci-babies, including complications.
	8.	Review, Questions & Answers, Evaluation --- Instructor: M.D. & EMS Staff	Review: Material and skills from Lessons 5, 6 and 7 Question/Answer Session. Evaluation: Written - 50 question exam Practical - Airway: Airway establishment. Use of suction. Use of airways, laryngoscope, McGill forceps - Breathing: Use of O_2 equipment Bag-mask usage - CPR: AHA performance tests in CPR
	9.	Life-Threatening Problem: Bleeding & Shock --- Instructor: M.D.	Lecture: Recognition and control of internal & external bleeding. Physiology of shock, including symptoms, type, and treatment. Demonstration: Estimation of blood loss, I.V. demonstration, pressure bandaging, blood pressure measurement. Practice Session: Pressure bandaging, blood pressure measurement, infusion arm, shock position.

DATE	SESSION	TOPIC	CONTENT & OBJECTIVES
	10.	Acute Medical Problems I Emergency Obstetrics and Care of Infants --- Instructor: M.D.	Lecture: 1) Physiology and anatomy of childbirth, normal delivery procedure, complications of childbirth, technique of guilding baby through vagina. Resuscitation of infants. Techniques of massaging uterus. Technique of putting on sterile gloves. 2) Recognition and treatment or problems with child patients, epilepsy and convulsions and contagious diseases. Practice Session: as available.
	11.	Acute Medical Problems II --- Instructor: M.D.	Lecture: Recognition and treatment of diabetes, asthma, emphysema, stroke, acute abdomen, angina pectoris, myocardial infarction, congestive heart failure, pulmonary edema. Practice Session: as available
	12.	Acute Medical Problems III --- Instructor: M.D.	Lecture: Psychological intervention, recognition and treatment of poisoning, drug problems, heat exposure, cold exposure, atmospheric and pressure injuries. Practice Session: as available.
	13.	Review, Questions & Answers, Evaluation --- Instructor: M.D. & EMS Staff	Review: Bleeding and Shock, Acute Medical Problems I, II, and III. Question/Answer Session. Evaluation: Written - 50 question exam Practical - Bandaging Blood pressure measurement Treatment for shock Use of infusion arm
	14.	Body Cavity and Genitalia Injuries --- Instructor: M.D.	Lecture: Recognition and care of thoracic cage injuries including fractures, crushed chest, flail chest and sucking wounds. Care of evisceration and blast injuries of the abdomen. Protection of genitalia and transportation of avulsed genitalia parts. Practice Session: Dressing and position of sucking chest wound, stabilization of flail chest, treatment of abdominal evisceration, management of genitalia injury, treatment of rib fracture.

DATE	SESSION	TOPIC	CONTENT & OBJECTIVES
	15.	Wounds, Burns and Eye Injuries --- Instructor M.D.	Lecture: Recognition, treatment and classification of wounds, burns and eye injuries. Practice Session: Bandaging of incision, wound, penetrating object, third degree burn, large foreign object in eye, lacerated eyelid, lacerated globe of eye.
	16.	Fractures & Dislocation of Long Bone and Pelvis --- Instructor: M.D.	Lecture: Signs and symptoms of fractures, dislocations and strain, general concepts of fractures, sprains, etc. Demonstration: Procedure to follow for splinting. Use of traction splint. Splinting fracture of upper extremities, lower extremities, treatment of dislocations of upper and lower extremities. Practice Session: Practice splinting techniques - humerus, radius, ulna, wrist, femur, tibia/fibula, ankle. Use of traction splint, air splints, padded boards, cravats & Kling.
	17.	Spinal Fractures and Head Injuries --- Instructor: M.D.	Lecture: Elements and functions of nervous sytem. Signs and symptoms of spinal fracture. Treatment of spinal injuries. Signs and symptoms of skull fracture. Treatment for injuries to skull or brain. Recognition and treatment of injuries to head, face and neck. Practice Session: Use of short board in conjunction with long board, use of long board and rope sling. Bandaging of head, neck and face injury. Work with blanket roll, cervical collars, universal dressings.
	18.	Initial Patient Assessment --- Instructor: M.D. & EMS Staff	Lecture: Explanation of procedures in initial evaluation of a patient and procedures in conducting an initial patient survey. Demonstration: Initial Patient Survey. Practice Session: Initial patient survey practice, problem solving in assessing, stabilizing and transporting patients with various illnesses and injuries.
	19.	Review, Questions & Answers ---	Review: Body Cavity Injuries, Wounds, Burns, Eye Injuries Fractures of Long Bones and Pelvis, Spinal Fractures & Head Injuries, Initial Patient Assessment. Question/Answer Session

DATE	SESSION	TOPIC	CONTENT & OBJECTIVES
	19.	(Continued) Instructor: M.D. & EMS Staff	Evaluation: Written - 50 question exam Practical - Bandaging Treatment of hand, eye injuries, sucking chest wounds, flail chest, fractured rib, pelvic fractures, upper and lower extremity fractures, evisceration, impaled object. Use of rigid splints, air splints, traction splints, cervical collar, short board, long board.
	20.	Movement of Patients --- Instructor: EMS Staff	Review: Diagnostic signs and various emergency situations. Demonstration: Use of lifts, carries, litters, stretchers, stair chair, blankets, log roll, 1-man lifts, 2-man lifts, orthopedic stretcher, loading of ambulance, short board, long board. Practice Session: Practice on all the above.
	21.	Extrication I (theory) --- Instructor: EMS Staff	Lecture: Covering various emergency situations, medical and mechanical aspects of extrication. Medical - EMT's responsibility to administer necessary emergency care. Mechanical - Methods of gaining access. Display and demonstration of equipment. Assignment of problems and working with equipment.
	22.	Extrication II --- Instructor: EMS Staff	Field Exercise: Accident scene. Use of preceding weeks of medical training and mechanical experience to successfully extricate victims from automobile accidents.
	23. Part I 7:00-8:30	Emergency Medical Communications --- Instructor: EMS Staff	Lecture: Introduction to emergency medical dispatching, mechanics and handling of ambulance and portable radios, radio discipline, telemetry and state, interstate and local EMS communication systems. Demonstration: Basic radio mechanics and handling. Practical: Use of ambulance and portable radios.

DATE	SESSION	TOPIC	CONTENT & OBJECTIVES
	23. (Continued) Part II 8:30-10:00	Legal Problems --- Instructor: Att.	Lecture: Legal aspects of emergency care.
	24.	General Review --- Instructor: M.D. & EMS Staff	Review of previous 25 lessions. Practice session including all phases of emergency care.
	25.	Written & Practical Exam --- Instructor: EMS Staff	100 item written final. Practical examination - situational problems.

A P P E N D I X C

1973 Assembly Bill 538

Date published:
July 2, 1974

CHAPTER 321, Laws of 1973

AN ACT to create 15.197 (4) (h), 20.435 (1) (d), 140.275 and 146.50 of the statutes, relating to the licensing of ambulance service providers and ambulance attendants, creating an examining council and making an appropriation.

The people of the state of Wisconsin, represented in senate and assembly, do enact as follows:

SECTION 1. 15.197 (4) (h) of the statutes is created to read:

15.197 (4) (h) Ambulance services. There is created an ambulance services examining council appointed by the state health officer and consisting of an emergency medical technician, a representative of a public ambulance service provider, a representative of a private ambulance service provider, a physician knowledgeable in the field of emergency medical care, 2 public members knowledgeable in the field of emergency medical care, and an employee of the division of health serving as a member and the secretary of the examining council. The examining council shall meet annually and may meet at other times on the call of the state health officer or of a majority of its members.

SECTION 2. 20.435 (1) (d) of the statutes is created to read:

20.435 (1) (d) Ambulance services examining council. A sum sufficient to provide for the licensing of ambulance attendants and service providers under s. 146.50.

SECTION 3. 140.275 of the statutes is created to read:

140.275 Emergency service classification (1) DEFINITION. In this section "area-wide comprehensive health planning agency" means a governmental agency or a private nonprofit corporation which meets the requirements of the federal partnership for health act, P.L. 89-749, as amended, and which has been designated by the state comprehensive health planning agency under that act as an area-wide comprehensive health planning agency.

(2) REGIONAL PLANS FOR EMERGENCY MEDICAL SERVICES. Each area-wide comprehensive health planning agency shall develop a plan for the provision of emergency medical services within the area.

(3) STATE RESPONSIBILITY. The department shall assist the area-wide comprehensive health planning agencies in the development of emergency medical service plans.

SECTION 4. 146.50 of the statutes is created to read:

146.50 Ambulance service providers and ambulance attendants. (1) DEFINITIONS. In this section:

(a) "Ambulance" means an emergency vehicle, including any motor vehicle, boat or aircraft, whether privately or publicly owned, which is designed, constructed or equipped to transport patients.

(b) "Ambulance service provider" means a person engaged in the business of transporting sick, disabled or injured persons by ambulance to or from facilities or institutions providing health services.

(c) "Ambulance attendant" means a person who is responsible for the administration of emergency care procedures, proper handling and transporting of the sick, disabled or injured persons, including but not limited to, ambulance attendants and ambulance drivers.

(d) "Person" includes any individual, firm, partnership, association, corporation, trust, foundation, company, any governmental agency other than the U.S. government, or any group of individuals, however named, concerned with the operation of an ambulance.

(e) "Board" means the health and social services board.

(f) "Department" means the department of health and social services.

(2) AMBULANCE SERVICE PROVIDER AND AMBULANCE ATTENDANT LICENSES REQUIRED. No person may operate as an ambulance service provider or an ambulance attendant unless he holds an ambulance service provider license or ambulance attendant license issued under this section.

(3) RULES. The board may adopt rules necessary for administration of this section and prescribe ambulance service equipment and standards, therefore, except that any ambulance which does not conform to rules adopted by the board may be used for a period not to exceed 5 years after the effective date of this act (1973). Counties, municipalities and volunteer or paid-on-call fire departments and rescue squads shall be exempt from all rules prescribing standards for ambulances and other vehicles until January 1, 1979. Rules adopted by the board under this section shall not be effective until approved by the senate committee on health, education and welfare and the assembly committee on health and social services.

(4) EXAMINING COUNCIL. The ambulance services examining council shall conduct such examinations as are required for licensing ambulance attendants and ambulance service providers and shall serve the board in an advisory capacity in the preparation of examinations, rules and the education and training of ambulance attendants.

(5) LICENSING OF AMBULANCE SERVICE PROVIDERS AND AMBULANCE ATTENDANTS. The department shall license ambulance service providers and ambulance attendants. An ambulance service provider shall not be required to take an examination for licensure. A license is nontransferable and shall be valid for the balance of the license year or until surrendered for cancellation or suspended or revoked for violation of this section or of any other laws or rules relating to ambulance service providers or ambulance attendants. The department may charge a reasonable fee for licensure under this section, but no fee may be charged to persons working for volunteer or paid-on-call ambulance service providers or to municipal or county employees. Any denial of issuance or renewal, suspension or revocation of a license shall be subject to review upon the timely request of the licensee directed to the department, in accordance with chapter H-1 of the Wisconsin Administrative Code or ch. 227.

(6) QUALIFICATIONS FOR LICENSING OF AMBULANCE ATTENDANTS. To be eligible for an ambulance attendant's license a person shall:

(a) Be not less than 18 years of age, of good moral character and physically and emotionally capable of performing the duties of an ambulance attendant.

(b) Have satisfactorily completed a course of instruction and training prescribed by the department or have presented evidence satisfactory to the department of sufficient education and training in the field of emergency care.

(c) Have passed an examination administered by the department.

(d) Have such additional qualifications as may be required by the department.

(7) LICENSING IN OTHER JURISDICTIONS. The department may issue an ambulance attendant's license, without examination, to any person who holds a current license as an ambulance attendant from other jurisdiction if the department finds that the standards for licensing in such other jurisdiction are at least the substantial equivalent of those prevailing in this state, and that the applicant is otherwise qualified.

(8) PROVISIONAL LICENSE. Any person who, on the effective date of this section (1973), has been actively engaged as an ambulance attendant or is enrolled in an acceptable training program and who does not meet the requirements for licensing, shall be issued a provisional license for one year without the need to present evidence of satisfactory completion of a course of instruction and training and without examination. A provisional license may be renewed for just cause, except that a provisional license shall not be renewed more than twice.

at this time, make recommendations for further legislative action that is required to implement area-wide emergency medical services plans.

SECTION 6. This act shall take effect on the 181st day after publication.

A P P E N D I X D

WESTERN WISCONSIN TECHNICAL INSTITUTE
Health Occupations Division

CENTRAL MEDICAL EMERGENCY DISPATCHER

5-31-415

Anita G. Smith Division Chairman	Gordon L. Johnson, M.D. Medical Director	William Gaumer, R.N. Bruce Jerue, R.N. Instructors

Lecture Hours	Total Hours
24	24

Central Medical Emergency Dispatcher
Page 2

COURSE DESCRIPTION:

Designed to prepare the radio operator to better handle phone calls requesting emergency medical care and to give an increased awareness of the Public Safety System and its capabilities.

OBJECTIVES:

The student will be prepared to:

1. Receive and process calls for assistance.
2. Dispatch and coordinate EMS resources.
3. Relay medical information.
4. Instruct callers in medical care.
5. Coordinate public safety services.

INSTRUCTIONAL METHODS:

Course will be presented in a total of 24 hours. Lecture-discussion format will be utilized with appropriate audiovisual aids as a supplement.

COURSE EVALUATION AND STUDENT RESPONSIBILITIES:

No letter grades will be issued for this course. Satisfactory course completion will be based on achievement of the listed objectives.

Student Responsibilities:

1. Attend all sessions.
2. Complete assignments.
3. Participate actively in class.
4. Take all quizzes and examinations.

BIBLIOGRAPHY:

Appropriate handout materials.

Central Medical Emergency Dispatcher
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COURSE CONTENT:

LECTURE	HOURS
1. EMS - A system and how it works	2
2. The CMED's realm	3
3. Emergency medical knowledge I	5
4. Emergency medical knowledge II	4
5. The phone call I	2½
6. The phone call II	4
7. Dispatch	2
8. Recapitulation and evaluation	1½
TOTAL	24

A P P E N D I X E

WESTERN WISCONSIN TECHNICAL INSTITUTE
Health Occupations Division
Emergency Medical Technician Program

Trauma Management

5-31-435

Anita G. Smith	Gordon L. Johnson, M.D.	William Gaumer, R.N.
Division Chairman	Medical Director	Bruce Jerue, R.N.
		Instructors

Lecture Hours	Laboratory Hours	Total Clock Hours
25	23	48

COURSE DESCRIPTION:

Designed to prepare the primary respondent to an accident or sudden severe illness in the appropriate lifesaving techniques to be carried out at the scene until regular emergency care and transportation can be obtained.

OBJECTIVES:

The student will be able to:

1. Define the rescuer's emergency care role and responsibilities and legal rights and obligations.
2. Describe the importance of oxygen to the body, particularly to the brain.
3. List the components of the respiratory system and explain how the system works.
4. Recognize the signs of adequate and inadequate breathing.
5. Describe airway care and resuscitation procedures for neck breathers (laryngectomees).
6. Restate the technique for inserting and precautions to follow when using airways.
7. Describe how the heart functions and the signs of cardiac arrest.
8. Describe the technique of cardiopulmonary resuscitation and variations in technique for infants and small children.
9. Identify organs near the heart and dangers to the patient if cardiopulmonary resuscitation is not performed correctly.
10. Identify the functions and components of the circulatory system.
11. Define the meaning of shock, list the signs and technique for preventing shock.
12. Describe the meaning of and emergency care for anaphylactic shock.
13. Describe the signs, symptoms and emergency care for internal and external bleeding.
14. Describe management of open and closed soft tissue wounds.

15. Explain fractures and dislocations and their common signs and symptoms.

16. Describe procedures for examining a patient for fractures of the extremities.

17. State the rationale for splinting fractures.

18. Describe the causes, signs and emergency care for the following medical emergencies (heart attack, angina, heart failure, stroke, diabetic coma, insulin shock, and epilepsy).

19. List the signs, emergency care and cautions associated with ingested poisons.

20. State the seriousness, care and caution associated with bites and stings.

21. List the effects of alcohol and drugs, emergency care and cautions.

22. Recognize the difference between first, second, and third degree burns.

23. Use the rule of nine's in estimating the seriousness of a burn.

24. Identify the cause, signs, and care for: heat cramps, heat exhaustion, heat stroke, general cooling of the body, superficial frostbite, and deep frostbite (freezing).

25. Discuss the procedures to follow in caring for the mother and baby in the event of an emergency childbirth.

26. Describe when accident victims should and should not be moved.

27. Describe emergency moves, lifts, and carries.

28. Define and describe the implications of variations in each vital sign.

29. State the procedure to follow in performing a patient examination.

30. Identify cases which would be considered of the highest priority for emergency and medical care.

31. Explain the common psychiatric problems associated with accidents.

32. Differentiate between psychiatric conditions and physical symptoms displayed by patient.

INSTRUCTIONAL METHODS:

Course will be comprised of lecture, demonstration and laboratory. Audio-visual aids and anatomical models will be utilized to supplement theory material.

COURSE EVALUATION AND STUDENT RESPONSIBILITIES:

No letter grades will be issued for this course. The student will pass or fail dependent on the following factors:

1. Achieve a 78% average on the unit tests.
2. Achieve a 78% on the final test.
3. Achieve 100% accuracy on the following competencies:
   A. Airway maintenance
   B. Cardiopulmonary resuscitation
   C. Treatment of wounds
   D. Splinting of fractures
   E. Handling of head and spinal injuries
   F. Lifting and movement of patients

STUDENT RESPONSIBILITIES:

1. Be punctual and attend all sessions.
2. Do suggested readings.
3. Do regular assignments.
4. Participate actively in class.
5. Take all quizzes and examinations.

BIBLIOGRAPHY:

A. TEXTBOOKS:

Committee on Injuries, AAOS, Emergency Care and Transportation of the Sick and Injured

B. REFERENCES (BOOKS):

American Red Cross, Advanced First Aid and Emergency Care, Doubleday and Company, Garden City, New York, 1973

Anthony, C.P., Structure and Function of the Body, St. Louis, Mo., Fourth Edition

Curry, G.J., Immediate Care and Transport of the Injured, Charles C. Thomas, Co., Springfield, Illinois, 1965

Grand, H., Murray, R., Emergency Care, Robert J. Brady Company, Bowie, Maryland, 1971

B. REFERENCES (BOOKS):

Sproul, C.W., Mullanney, P.J., Emergency Care (Assessment and Intervention), C. V. Mosby Company, St. Louis Mo., 1974

Stephenson, H.E., Immediate Care of the Acute Ill and Injured, C. V. Mosby Company, St. Louis, Mo., 1974

U.S. Department of Transportation, National Highway Traffic Safety Administration, Crash Injury Management, Washington, D.C., 1973

Young, C.B., First Aid for Emergency Crews, Charles C. Thomas, Co., Springfield, Illinois, 1970

C. REFERENCES (PERIODICALS):

Beatty, C.J., "Guess Who's Dying at Dinner", R.N. 35, November, 1972, pp. 52-53

Committee on Trauma and Committee on Shock, Division of Medical Sciences, National Academy of Sciences - National Research Council; Accident Death and Disability: The Neglected Disease of Modern Society, NAS-NRC, 1966, Washington, D.C.

Craven, R.F., "Anaphylactic Shock", American Journal of Nursing, 72, April, 1972, pp. 718-721

Editor, "Those Critical First Minutes", R.N. 35, June, 1972, pp. 46-47

Hinkhouse, Ann, "Craniocerebral Trauma", AJN 73, October, 1973, pp. 1719-1722

Lee, J.M., "Emotional Reactions to Trauma", Nursing Clinics of North America, 5:577-587, December, 1970

Ohio Trade and Industrial Education Service, Division of Vocational Education; Emergency Victim Care and Rescue: Textbook for Squadmen; Second Edition, Instructional and Material Laboratory Trade and Industrial Education, Ohio State University, 1967

Wagner, M.M., "Assessment of Patients with Multiple Injuries", AJN 72, pp. 1822-1827, October, 1972

Webb, K.J., "Early Assessment of Orthopedic Injuries", June, 1974, AJN 74, pp. 1048-1052

Weistock, F.J., "Emergency Treatment of Eye Injuries", AJN 71, pp. 1928-1931, October, 1971

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COURSE CONTENT:

LECTURE	HOURS	LABORATORY	HOURS
LESSON			
1. Introduction A. Philosophy B. Course Structure C. Legal Aspects D. Equipment General Anatomy & Physiology A. General - Overview	3	Movie: "Before the Emergency"	
2. General Anatomy & Physiology Pulmonary Resuscitation (Respiratory) A. Anatomy & Physiology B. Pathology	3	Movie: "The Incredible Machine"	
3. Airway Maintenance A. Obstructions B. Treatments Cardiopulmonary Resuscitation Theory	2	Oxygen Tank Positioning Suctioning Cleaning Bag Mask Resuscitation Movie: "New Pulse of Life" Movie: "Heimlich Manuever"	1
4. Cardiopulmonary Resuscitation Demonstration	1	1 Man CPR 2 Man CPR Infant CPR Obstructed Airway Witness Arrest	2
5. CPR PRACTICE		CPR PRACTICE	3
6. Review	1	Written and Practical Examination	2
7. Shock, Bleeding, Eye Injuries to Soft Tissues A. Physiology B. Signs and Symptoms C. Emergency	2	Bandaging Bleeding Control Treatment of Shock	1

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LECTURE	HOURS	LABORATORY	HOURS
8. Fractures and Dislocations of the Extremities A. Signs and Symptoms B. Treatment	1	Splinting Fractures Rigid Traction	2
9. Injuries to the Skull, Spine Chest, Pelvis A. Anatomy & Physiology B. Symptomology C. Immobilization	2	Stabilization Back Boarding Movement of Patients	1
10. TRAUMA PRACTICE		PRACTICE	3
11. Review	1	Written and Practical Examination	2
12. Heart Attack, Stroke, Diabetes, Epilepsy, Poisons, Acute Abdomen Dyspnea A. Pathophysiology B. Signs and Symptoms C. Treatments	3		
13. Drugs, Burns, Hot & Cold Injuries, Psychiatric Emergencies A. Types B. Signs and Symptoms C. Treatment	3	Movie: "Psychoactive"	
14. Emergency Childbirth A. Assisting B. Complications Movement of Patients	1	Movie: "Emergency Obstetrics" O.B. Manikin Lifts Drags Carries	2
15. Patient Examination Triage A. Differentiation of Normal and Abnormal Physical Aspects B. Priorities C. Situational Review	1	Practical Situations	2
16. FINAL EXAM	1		2
Total Hours	25		23

LABORATORY COMPETENCIES:

1. Demonstrate techniques used in airway maintenance - 100%
   A. Head tilt, neck extension method
   B. Chin lift method
   C. Jaw thrust method
   D. Use of suction apparatus
   E. Insertion of an artificial airway
   F. Use of oxygen equipment

2. Demonstrate proper technique in artificial resuscitation - 100%
   A. Give mouth-to-mouth
   B. Give mouth-to-nose
   C. Give mouth-to-mouth and nose on infant
   D. Use the bag mask properly
   E. Expell air from the patient's stomach

3. Demonstrate proper technique in CPR - 100%
   A. Properly check the patient for breathing, heartbeat, discoloration, pupillary response
   B. Initiate and continue 1 man CPR
   C. Show ability to perform in either position in 2 man CPR
   D. Show ability to perform CPR on an infant

4. Demonstrate measures used to prevent further blood loss or loss of effective circulating blood volume - 100%
   A. Show various methods of controlling open hemorrhage
   B. Show how to treat a patient for shock
   C. Demonstrate proper technique for measuring block pressure

5. Show how to assist normal childbirth - 80%
   A. Demonstrate sterile gloving technique
   B. Show how to massage a uterus just after the birth process

6. Demonstrate ability to treat burns and wounds of various types and classifications - 100%
   A. Bandage incisions and lacerations
   B. Show how to treat a patient with a penetrating object
   C. Treat a third degree burn
   D. Demonstrate treatment of a large foreign object in the eye
   E. Treat for lacerated eyelid
   F. Treat for lacerated globe of eye

7. Demonstrate ability to splint various fractures - 100%
   A. Use proper technique in splinting the humerus, radius, ulna, wrist, femur, leg, and ankle
   B. Make proper use of traction splint, air

8. Demonstrate proper handling of the patient with a head or spinal injury - 100%
   A. Show proper use of a short board
   B. Demonstrate log rolling technique
   C. Show how to use a long board
   D. Use a rope sling
   E. Do bandaging of the head, neck, and for facial injury
   F. Use head stabilization equipment such as blanket roll and cervical collar

9. Demonstrate proper methods of lifting and transporting sick and injured patients - 100%
   A. Use the: blanket drag
      clothes drag
      fireman's drag
      pack strap carry
      fireman's carry
      saddle back carry
   B. Demonstrate safe transfer techniques such as bed to cot
   C. Use the two-man pick-up and two-man seat carry
   D. Do the two-man extremity carry
   E. Demonstrate the chair carry up and down stairs
   F. Use the four-man log roll in conjunction with the spine board
   G. Properly load and unload an ambulance
   H. Use good body mechanics at all times

A P P E N D I X F

WESTERN WISCONSIN TECHNICAL INSTITUTE

Health Occupations Division

Emergency Medical Technician Program

Vehicle Extrication 5-31-445

		William Gaumer, R.N.
		Bruce Jerue, R.N.
Anita G. Smith	Gordon L. Johnson, M.D.	Robert Ustby, R.N.
Division Chairman	Medical Director	Instructors

Lecture Hours	Laboratory Hours	Total Clock Hours
6	6	12

COURSE DESCRIPTION:

Designed to prepare emergency care personnel with applicable techniques for extricating victims from automobile wreckage while providing optimum emergency medical care.

Prerequisites: 5-31-425; or 5-31-410, or 5-31-104, or 5-31-407

OBJECTIVES:

The student will be able to:

1. Describe the basic elements of extrication in both medical and mechanical phases.
2. Compare the efficiency of various extrication tools.
3. Solve appropriate extrication problems in the laboratory.
4. Explain why aid must be given before full extrication can ensue.
5. Describe hazards which may be commonly encountered.
6. Define safety measures to be taken when fire and electrical hazards are present.
7. Design an operational scheme to be followed for at least one extrication problem.

INSTRUCTIONAL METHODS:

Course will be presented in a total of twelve hours. Lecture format with audio-visual support will be utilized and combined with laboratory practice.

COURSE EVALUATION AND STUDENT RESPONSIBILITIES:

No letter grades will be issued for this course.

Student responsibilities:

1. Attend all class sessions
2. Do suggested reading
3. Participate actively in class
4. Provide own hard hat, safety goggles and gloves
5. Behave in a safety oriented manner

BIBLIOGRAPHY:

References:

Emergency Care, Grant and Murray, Robert J. Brady Co., Bowie, Maryland, 1971

Emergency Care and Transportation of the Sick and Injured, American Academy of Orthopedic Surgeons, 1977

COURSE CONTENT:

LECTURE	HOURS	LABORATORY	HOURS
1. Introduction A. Registration B. Extrication 1) Mechanical 2) Medical 3) Slide/tape	3	Films: "Collision Rescue" "Extrication Rescue"	
2. Safety Hazards A. Fire B. Electrical	1	Applied Fire Control Techniques	1
Hurst Tool Demonstration	1		
3. Applied Extrication A. Demonstration	1	Applied Extrication Skills	2
4. Laboratory		Extrication Problem Solving	3
Totals	6		6

A P P E N D I X G

WESTERN WISCONSIN TECHNICAL INSTITUTE
Health Occupations Division

Emergency Medical Technician Techniques

5-31-420

Anita G. Smith	Gordon Johnson, M.D.	William Caumer, R.N. Bruce Jerue, R.N.
Division Chairman	Medical Director	Instructors

Lecture Hours	Laboratory Hours	Total Hours
14	10	24

COURSE DESCRIPTION:

Designed to renew the basic skills of the Emergency Medical Technician and to present new techniques in field emergency care as they are developed.

OBJECTIVES:

At the end of this course, the student will be able to;

1. Explain what defensive driving involves.
2. Tell why defensive driving is especially important in an emergency vehicle.
3. Give at least three tips for safe driving of an ambulance.
4. Define who is covered by the Good Samaritan Act of 1977.
5. Tell what privileges the driver of an emergency vehicle may exercise in traffic.
6. Explain the following legal terms:
   increased responsibility to look out
   acted in due regard
   within the scope of employment
   implied consent
   ordinary negligence
   criminal negligence
   tort
7. Tell why good documentation of patient care activities and observations is essential both for communications and legality.
8. Demonstrate an understanding of the causes and effects of cardiac arrest.
9. Describe the diagnostic signs of cardiac arrest.
10. Demonstrate the following skills with 100% accuracy:
    1 rescuer CPR
    2 rescuer CPR
    Infant CPR
    Obstructed airway procedure
    CPR in a moving vehicle
    Use of the demand valve inhalator
11. Achieve at least 85% on a written examination on CPR.

Objectives - continued

12. Demonstrate with 100% accuracy the following skills during a practical examination:
    1 rescuer CPR
    2 rescuer CPR
    Infant CPR
    Obstructed airway procedure

13. Describe 3 major concerns in the treatment of wounds.

14. Demonstrate the interventions for bleeding control and state the rationale for each.

15. Demonstrate correct bandaging technique for each of the following areas:

Head	Axilla
Eye	Extremities
Shoulder	

16. Describe the signs and symptoms of shock.

17. List the types of shock.

18. Briefly describe the pathophysiology of shock.

19. Describe the traditional treatment of shock.

20. Explain why the military anti-shock trouser (MAST) is useful in treating shock.

21. Give three instances when the MAST should not be used.

22. Demonstrate applications of the MAST.

23. List the signs and symptoms of a fracture.

24. State why it is important to prevent movement of fractured bone ends.

25. List the possible complications of fractures if they are mishandled.

26. Demonstrate immobilization of the following fractures with 100% accuracy:

Clavicle	Femur
Humerus	Tibia
Radius or ulna	

Objectives - continued

27. Explain why traction is necessary in splinting, especially the femur.

28. Define the term dislocation as it applies to musculoskeletal injuries.

29. State why it is important to splint dislocations.

30. Demonstrate the splinting of the following with 100% accuracy:
    Elbow joint
    Hip joint
    Knee joint

31. Define the term sprain and tell why a sprain should be treated as a fracture.

32. Define the term strain and describe the treatment of a strain.

33. Apply the general principles of splinting in any situation that involves musculoskeletal injury with 100% accuracy.

34. Describe the signs and symptoms of a skull fracture.

35. Tell how to evaluate a patient for brain injury.

36. Demonstrate with 100% accuracy the various interventions for head injuries.

37. Demonstrate a total body survey with emphasis on discovering spinal injuries.

38. Explain the importance of maintaining correct spinal alignment in cases of actual or suspected spine injury.

39. Demonstrate the following spinal immobilization techniques with 100% accuracy:
    Log roll
    Short board
    Build-a-board
    Treatment of shallow water diving injuries

40. Apply the general principles of treatment for head and spine injuries in any given situation with 100% accuracy.

Objectives - continued

41. Given several situations, apply the various assessment techniques and interventions that are applicable to the situation with 100% accuracy.

42. List the signs and symptoms and treatment of the following medical conditions:

Heart attack	Diabetic conditions
Stroke	Drug overdose
Heart failure	Acute abdominal conditions

43. Describe your feelings and values elicited by the situations shown in the video tape exercise on values clarification.

INSTRUCTIONAL METHODS:

Emphasis will be on skill renewal by demonstration and practice utilizing videotapes, slides, films and lecture-discussion format.

COURSE EVALUATION:

No letter grades are issued for this course, however, each student, in order to successfully complete this course, must:

1. Complete the pre-test.
2. Pass the CPR practical exam and achieve at least 84% on the CPR written test.
3. Achieve at least 78% on the post-test.

STUDENT RESPONSIBILITIES:

1. Be punctual and attend all sessions.
2. Do assigned reading.
3. Participate actively in class.
4. Take all examinations.

BIBLIOGRAPHY:

1. AHA/NRC; "Basic Life Support" Jan. 8, 1974.
2. American Trauma Society; "Procedures for MAST Trouser Application".
3. Anast, G.T.; "Physical Assessment of Long Bone Fractures"; Emergency Product News; Jan/Feb. 1977.
4. Balts, D.; "Vacationing Youth Returned to Life in Melrose Rescue"; La Crosse Tribune; Aug. 17, 1975.

Bibliography - continued

5. Barber, J.M.; "Diabetic Emergencies"; EMT Journal; Sept. 1977.

6. Bennett, B.R.; "Shock: An Approach to Teaching EMT's Normal Physiology Before Pathophysiology"; EMT Journal; Vol. 2. No. 1, March, 1978.

7. Bennett, R.M.; "Drowning and Near-Drowning, Etiology and Pathophysiology"; AJN; Vol. 76. No. 6, June, 1976.

8. Bruley, M.E.; "Guidelines for the Selection and Use of Anti-Shock Garments"; EMT Journal; Vol. 2. No. 1, March, 1978.

9. Burnette, W.E.; "The Lord and the EMT"; EMT Journal; June, 1977.

10. Caudle, J.T.; "Emergency Nursing of Near-Drowning Victims"; AJN; Vol. 76. No. 6, June, 1976.

11. Cowan, W.; "Triage, What It Is and How It Works"; Emergency Product News; April, 1976.

12. Fanner, G.; "Heart Failure in the MI Patient"; AJN; February, 1977.

13. Frew, S.; "Good Samaritan Legislation and The EMT"; EMT Journal; Vol. 1. No. 2, June 1977.

14. Gassaway, B.M.; "Death and the EMT"; Emergency Medical Services; September/October, 1976.

15. Heckman, J.; "When You're Out of Circulation"; Emergency Product News; August, 1977.

16. Hogan, K.M., Sawyer, J.R.; "Fracture Dislocation of the Elbow"; Emergency Product News; August, 1976.

17. Houser, D.; "What to do First When a Patient Complains of Chest Pains"; Nursing '76; November, 1976.

18. Jerue, B.E.; "Emergency Care for Drug Abuse"

19. Kaplan, B.C., et al; "The Mast Anti-Shock Trouser in Pre-Hospital Emergency Care"; Journal of Trauma; 13:843-848, 1973.

20. Lambrew, C.T.; "Basic and Advanced Life Support: An Overview"; EMT Journal; Vol. 1. No. 4, December, 1977.

21. Lilja, G.P.; "Value of the Counterpressure Suit (M.A.S.T.) in Pre-Hospital Care"; Minnesota Medicine, Vol. 58:540-543.

22. McSwain, N.E.; "Traumatic Shock"; Emergency Product News; August, 1977.

23. Molyneux-Luick, M.; "The ABC's of Multiple Trauma"; Nursing '77, October, 1977.

Bibliography - continued

24. Nolte, C.T.; "Cardiogenic Shock, Interference with Man's Life - Sustaining Pump"; Emergency Product News; August, 1977.

25. Pilcher, D.B., et al; "Too Much or Too Little: Assessment at the Scene of the Injury"; EMT Journal; Vol. 1. No. 2, June, 1977.

26. Rubsamen, D.S.; "Head Injury with Unsuspected Cervical Fracture"; JaMa, July 29, 1974, Vol. 229. No. 5.

27. Rudy, E.' "Early Omens of Cerebral Disaster"; Nursing '77, February, 1977.

28. Shub, M.G.; "Management of the Psychiatric Patient"; EMT Journal; Vol. 1, No. 4; December, 1977.

29. Shub, M.G.; "Trespass on Justifiable Entry"; EMT Journal; Vol. 2. No. 1, March, 1978.

30. Synder, J.C.; Wilson, M.F.; "Elements of a Psychological Assessment"; AJN, February, 1977.

31. Troeger, J.; "The Xenia Disaster"; Emergency Product News; April, 1976.

32. Vorhees, J.; "The Lingering Danger of Head Injuries"; RN; April, 1975.

33. Wahl, S.; "Only a Concussion"; Nursing '76, August, 1976.

34. Waldhour, R.H.; "Management of the Epileptic Patient"; EMT Journal; March, 1978.

35. Webb, K.J.; "Early Assessment of Orthopedic Injuries"; AJN, June, 1974.

36. White, K.M.; "Evaluating the Trauma of Gunshot Wounds"; AJN, October, 1977.

37. White, R.D.; "Heart Attack and Emergency Cardiac Care"; EMT Journal; Vol. 1. No. 4, December, 1977.

38. White, R.K.; "Shock: A General Discussion"; Emergency Product News; August, 1977.

39. Wiley, L.; "Shock"; Nursing '74; May, 1974.

40. Wilson, R.F.; "Management of Shock"; EMT Journal; Vol. 2. No. 1, March, 1978.

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COURSE CONTENT:

LECTURE	HOURS	LABORATORY	HOURS
1. Registration Defensive Driving Legal Issues Pre-Test	1/2 1 3/4 3/4		
2. Cardiopulmonary Resuscitation	2	CPR Practice	1
3. Cardiopulmonary Resuscitation Review Exam	1½	Practical Exam	1½
4. Soft Tissue Injuries Shock	1/2	Bandaging MAST	1½
5. Musculoskeletal Injuries	1	Splinting	2
6. Head Injuries Spine Injuries	3/4 1¼	Log Roll Short board Build-a-board	1
7. Problem Solving		Situations	3
8. Medical Problems Values Clarification Post-Test Course Evaluation	1 3/4 3/4 1/2		
TOTALS	14		10

LABORATORY COMPETENCIES:

1. Demonstrate the following basic life support measures with 100% accuracy:
   - 1 rescuer CPR
   - 2 rescuer CPR
   - Infant CPR
   - Obstructed airway procedure
   - Use of the demand valve resuscitator

2. Demonstrate each of the following bandaging techniques with 100% accuracy:
   - Head
   - Eye
   - Shoulder
   - Axilla
   - Extremities

3. Demonstrate with 100% accuracy the application of the MAST.

4. Demonstrate the following immobilization techniques with 100% accuracy:
   - Fractured clavicle
   - " humerus
   - " radius or ulna
   - " femur
   - " tibia
   - Dislocations of the elbow
   - " " " hip
   - " " " knee
   - Sprained ankle

5. Demonstrate the following spinal immobilization techniques with 100% accuracy:
   - Log roll
   - Short board
   - Build-a-board

6. Demonstrate proficiency in treatment of multiple injury situations to 100% accuracy.

A P P E N D I X H

EMERGENCY MEDICAL SERVICES STANDARDS FOR WESTERN WISCONSIN

The following is a compilation of Emergency Medical Services Standards which were developed to coincide with the general and specific objectives for emergency medical services in the Areawide Health Plan.

General Objective: Accessible and acceptable high quality emergency health care to meet the needs of illness and accident victims in the area.

MANPOWER

Standards

1. A minimum of two trained EMT's should respond with the vehicle to all ambulance calls.

2. A trained emergency services dispatcher should be the focal point of all requests for emergency services within each county or ambulance service area.

3. The general public should be encouraged to receive training to a minimum level of standard Red Cross first aid and/or medical self-help.

4. All first responders such as law enforcement and fire fighting personnel should be trained to the minimum level of crash injury management procedures with cardio-pulmonary resuscitation (CPR) and extrication.

5. For a full-time ambulance service (7 days a week, 24 hours a day, 365 days a year), a minimum of 7 trained personnel (per primary vehicle) are recommended.

6. For a volunteer or part-time public ambulance service, (to operate 7 days a week, 24 hours a day, 365 days a year), a minimum of 14 trained persons are recommended for operation.

7. All emergency room personnel in 24-hour facilities should be trained in emergency medical procedures.

8. Two persons trained in emergency medical procedures should be on duty inhouse 24 hours a day, in rural hospitals.

9. Physicians staffing hospital emergency departments should be familiar with emergency medical procedures.

10. For hospital emergency departments, a licensed physician familiar with emergency medical procedures should be on-call to the emergency department either inhouse or from outside the hospital 24 hours a day, 7 days a week.

11. The duty physician on call should not be further from the hospital than the recommended maximum ambulance response time.

12. A minimum number of staff to man the hospital laboratory should be on call either inhouse or from outside the hospital 24 hours a day, 7 days a week.

13. A minimum number of staff to man the radiology department of the hospital should be either on call, inhouse, or from outside the hospital 24 hours a day, 7 days a week.

TRANSPORTATION

Specific Objective 1: Adequate emergency vehicles that are equipped for the provision of high quality emergency medical services assistance.

Standards

1. The minimum of one primary emergency medical services vehicle* should be available for each emergency medical services district.

2. In urban service areas, a minimum of one reserve vehicle should be available for every 3 operational vehicles.

3. In rural service areas where three or more vehicles are operational, their mutual support should provide all required demand for reserve units.

CONSUMER PARTICIPATION

Standards

1. A minimum of 51% of the membership of the Areawide EMS Council should be consumer representatives of the area.

2. A minimum of 51% of the county EMS Council should be consumer representatives of the county.

3. Consumer comments in regard to the EMS system in the area should be solicited by the Areawide EMS Council.

TRANSFER OF PATIENTS

Standards

1. The dispatch center which receives the request for emergency aid should dispatch the ambulance vehicle which is nearest the scene of the emergency.

*Vehicles and equipment should meet American College of Surgeons Standards

2. Ambulance attendants should determine, after patient assessment with physician consultant and patient consent, which facility the patient should be transported to.

3. Non-emergency transfers should be scheduled for non-peak hours of emergency calls.

COMMUNICATIONS

Standards

1. All ambulance vehicles should have communications capabilities with area hospitals on 155.340 MHz.

2. A separate frequency other than 155.340 MHz for mobile-to-base communications should be utilized for non-patient related business.

3. All acute short-term hospitals should have radio communication capabilities to transmit and receive on the designated emergency frequency of 155.340 MHz and the designated administrative frequency of 155.280 MHz.

4. The central dispatch point for each county should have communication capabilities with local hospitals, area hospitals, ambulance vehicles, law enforcement, fire fighting units, emergency government and civil defense.

5. The duty attendants in volunteer ambulance operations should be equipped with paging units where feasible.

6. A single emergency services dispatch point should be established (where feasible) within each county.

7. All central dispatch points within an area should constitute an area communications network.

8. All telephones should have the emergency services number attached to the unit.

9. All coin operated telephones should provide access to the operator without the use of a coin.

10. The geographical location of all public telephones should be displayed on the unit.

11. A single emergency number should be designated in a service area of each emergency service dispatch center.

12. The universal emergency number "911" should be implemented as soon as feasible within the area for citizen access to all types of emergency services.

13. The use of biomedical telemetry should be used only in areas where the following criteria can be met:

    A. There must be immediately available in the hospital adequate medical back-up on a 24 hours per day basis.

    B. Hospitals providing this support must be categorized as a general emergency services at a minimum.

    C. Ambulance personnel must be graduates of an approved advanced EMT program or an RN so they may implement appropriate measures upon instruction from their medical support to deal with the patient's problem.

14. Communications should be established by the ambulance vehicle with the primary hospital base immediately following dispatch to the scene whenever feasible.

15. Communications should be established with the duty emergency room physician via the hospital base immediately following assessment of need by the ambulance attendant at the scene of the emergency.

16. Communications should be established between the ambulance and the regional hospital immediately upon determination that the patient will be transported directly to the regional facility.

17. In rural areas served by quick response teams, the response team should be notified prior to dispatch of ambulance vehicle.

PUBLIC SAFETY AGENCIES

Standards

1. All public safety personnel who could possibly function as first responders, in a medical emergency should be trained in CPR and crash injury management.

2. The role of public safety agencies and their personnel should be defined in an annual written plan in cooperation with emergency government and civil defense. (Revised January 1 each year)

SYSTEM ACCESS

Standards

Definition: The maximum allowable response time is defined as the time from receipt of call at dispatch point to the arrival of personnel at the scene of the emergency.

1. The maximum allowable response time in a rural area should be 30 minutes under good conditions.

2. The maximum allowable response time in an urban area should be 10 minutes under good conditions.

3. The service area for mutual aid agreements as a secondary response vehicle should be defined.

4. The secondary response unit should be alerted when the primary vehicle is dispatched.

FACILITIES

Standards

1. The following minimal supplies and equipment should be available in all hospital emergency departments:

   A. Ventilation equipment (manually controlled position pressure unit)
   B. Suction with pharyngeal tips and tracheal catheters
   C. Central venous pressure monitoring (optional)
   D. Intravenous fluids and devices
   E. Gastric lavage equipment
   F. Fixed oxygen supply
   G. Portable oxygen supply
   H. Tracheal intubation equipment
   I. Drug kit for cardio-pulmonary emergencies
   J. Sterile tracheostomy equipment
   K. Chest tube equipment
   L. Monitor and defibrillator equipment

2. A blood storage facility should be located in the hospital.

3. A reserve supply should be readily available from an established local blood bank or from local donors available from a current roster of such donors. (Update semi-annually)

4. The hospital emergency department should be capable of conducting two-way radio communication, with ambulances in the area on channel 155.340 MHz and other hospitals on channel 155.280 MHz.

5. The capability of the hospital emergency department should be described in an annual plan prepared in conjunction with other community health facilities and local public safety agencies for mass casualty situations.

6. Continuing and inservice educational programs should be conducted on a regular basis for all emergency personnel, including physicians, nurses, and allied health personnel.

7. A predetermined plan should be established and reviewed on an annual basis for the disposition of acutely disturbed patients to appropriate facilities which specialize in such care.

8. A predetermined plan for the disposition of patients diagnosed as alcoholic or drug abuser should be developed and reviewed on an annual basis.

9. Regular meetings should be conducted for the purpose of continuing education in the field of emergency medical care with emergency room personnel and those ambulance personnel which utilize their facility.

CRITICAL CARE UNITS

Standards

1. Critical care units should be maintained in those hospitals where it's economically and medically feasible.

2. A minimum annual patient load should be defined for efficient critical care unit operation.

3. Critical care units should be linked to regional medical facilities where possible for medical consultative purposes and physiologic monitoring.

4. The location of specialized medical services - critical care capabilities (trauma, burns, psychiatric, cardiac, neuro-surgical, respiratory, neonatal, detoxification, etc.) should be part of local continuing education programs for all personnel involved with emergency medical care.

TRAINING

Specific Objective 4: Adequate personnel such as ambulance drivers, emergency medical technicians, physicians, and hospital emergency room staff that will provide high quality service to citizens in the event of an emergency.

Standards

1. All ambulance drivers and attendants should be trained to the basic minimum level of Emergency Medical Technician.

*2. All emergency vehicle drivers and attendants should be trained in an emergency vehicle defensive driving course.

3. First responders other than ambulance attendants should be trained in CPR and crash injury management.

4. Public safety personnel who could possibly be in contact with medical emergencies should be trained in cardio-pulmonary resuscitation and crash injury management.

5. Public safety personnel should have EMT training when training resources permit.

6. All health care personnel, directly associated with the problem of emergency care should avail themselves of seminars, programs, and other continuing educational opportunities associated with emergency medical care.

7. All health care personnel including physicians should maintain proficiency in emergency medical skills by participating in annual refresher training programs which would include CPR.

8. All emergency service dispatchers should complete the specific course for central medical emergency dispatch (CMED).

9. Emergency Medical Technicians should attend eight hours of medically supervised time in a regional hospital emergency facility annually.

STANDARD MEDICAL RECORD KEEPING

Specific Objective 3: An efficient communication system, including central dispatch, which provides a direct link between all agencies involved in the provision of emergency medical care.

*Drivers and attendants should be interchangeable.

Specific Objective 5: An emergency medical services transfer system that will provide emergency victims the necessary definitive and specialized treatment according to the patients' needs.

Standards

1. All patient requests for emergency medical services should be recorded on a uniform standard medical record.

2. All Emergency Medical Services should maintain a log of uniform medical records in chronological order.

3. A copy of the standard medical record must be forwarded with the patient at the time of disposition to a regional hospital emergency facility. (A copy left with the primary facility should be forwarded to the regional facility.)

CONSUMER INFORMATION EDUCATION

Specific Objective 3: An efficient communication system, including central dispatch, which provides a direct link between all agencies involved in the provision of emergency medical care.

Standards

1. An organized public information and education program should be developed by the Areawide Emergency Medical Services Council under the direction of the areawide health systems agency to inform consumers of how to access the emergency services system.

2. All area citizens should be trained to the level of Red Cross basic first aid and/or medical self-help through the public and parochial school system.

3. The general education program of the community in the field of emergency medical care should be conducted on an annual basis with the cooperation of all local media.

4. All citizens of the area should be informed of warning signs and symptoms of certain disease states such as heart attack, stroke, insulin shock/diabetic coma, epilepsy, choking.

5. Area citizens with knowledge of personal medical problems should be encouraged to wear medic alert tags.

EVALUATION

General Objective: Accessible and acceptable high quality emergency health care to meet the needs of illness and accident victims in the area.

Standards

1. All elements of the emergency medical services system should be evaluated by the Areawide Emergency Medical Services Council under the direction of the areawide health systems agency on an annual basis.

2. The evaluation of the emergency medical services system should be conducted at two levels - area and sub-area.

3. Written comment regarding the EMS system status from the director of each hospital emergency department on an annual basis should be obtained.

4. Regular meetings of the hospital emergency room staff and area ambulance operators should be conducted for purposes of medical evaluation of operations.

MUTUAL AID AGREEMENTS

Specific Objective 1: Adequate emergency vehicles that are equipped for the provision of high quality emergency medical services assistance.

1. Each emergency ambulance service should maintain written agreement, with services in adjacent ambulance districts to assist in initial response or provide additional support on a temporary basis during an emergency. Such written agreements should be renewed prior to January 1 of each year.

A P P E N D I X I

WESTERN WISCONSIN TECHNICAL INSTITUTE
Health Occupations Division
Emergency Medical Technician Program

Number of Graduates of Basic Emergency Medical Technician Course, Number Employed, Area of Employment and Number in Other Employment or School.

Class	Number of Graduates	Number employed as EMT's	Number in Jobs Other than EMS	Job Title
Sparta/Tomah R-1	18	16	2	1 - Teacher 1 - Student in X-Ray
Viroqua R-1	15	14	1	Unknown
Mauston R-1	15	14	1	1 - Gas Station Employee
Black River Falls R-1	17	17		
Whitehall R-1	16	15	1	1 - Student in Nursing
Necedah R-1	17	17		
La Crosse R-1	17	15	2	1 - Truck driver 1 - Student
Cochrane R-1	13	13		
Tomah R-1	19	17	2	2 - Moved out of area
Hillsboro R-1	12	12		
La Crosse R-2	9	9		
Viroqua R-2	10	10		
Tomah R-2 (in progress)				
Whitehall R-2 (in progress)				
Cochrane R-2 (in progress)				
TOTALS	178	169	9	

A P P E N D I X J

WESTERN WISCONSIN TECHNICAL INSTITUTE
Health Occupations Division

Basic Emergency Medical Technician

5-31-407

Anita G. Smith Division Chairman	Gordon L. Johnson, M.D. Medical Director	William Gaumer, Program Head Bruce Jerue Physicians as listed separately for each course. Instructors

Lecture Hours	Laboratory Hours	Total Hours
46	44	90

BIBLIOGRAPHY (continued):

Seyfried, Marie; "Recognizing Respiratory Acidosis and Alkalosis", RN, July, 1974, pp 48-49.

Webb, K.J., "Early Assessment of Orthopedic Injuries", June, 1974, AJN pp 1048-1052.

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I - Instructor
M.D. - Physician

COURSE CONTENT:

Lecture	Hours	Laboratory	Hours	Lecturer
1. Introduction A. Functions of EMT B. Legal Problems C. Defensive Driving D. Equipment	3	Film: "Before the Emergency" "Wanted Alive"		I
2. Anatomy and Physiology A. Skeletal B. Muscular C. Nervous	3	Examine skeleton Examine anatomy of boney framework Videotape: "The Incredible Machine"		M.D.
3. Circulatory and Respiratory and Integumentary A. Blood flow B. Pumping action C. Systems D. Pulmonary	3			M.D.
4. Digestive and Genito-urinary and Special Sense Organs A. Review	2	Examination	1	M.D.
5. Airway Maintenance A. Anatomy B. Obstructions C. Treatments	1½	Positioning Airway insertion Suctioning Clearing the airway Visualization Film: "Heimlich Manuever"	1½	M.D.
6. Pulmonary Resuscitation	1	Practice mouth-to-mouth Practice mouth-to-nose Bagmask O_2 adm. Infant resuscitation Film: "Emergency Airway" "New Pulse of Life"	2	M.D.

Basic Emergency Medical Technician 5-31-407
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I - Instructor
M.D. - Physician

Lecture	Hours	Laboratory	Hours	Lecturer
7. Cardiac Arrest A. Brain - O_2 relationship B. Anatomy of thorax	1	Perform CPR - 1 man - 2 man Perform Infant CPR	2	M.D.
8. CPR Practice		Practice CPR Techniques	3	I
9. Review	1	Written and practical exams	2	M.D.
10. Bleeding and Shock A. Hemorrhage 1. Open 2. Concealed B. Shock	2	Bandaging Bleeding control Treatment for shock Blood pressure	1	M.D.
11. Acute Medical Problems I A. Childbirth B. Child patients C. Epilepsy D. Contagious Disease	3	Film: "Emergency Obstetrics"		
12. Acute Medical Problems II A. Myocardial Infarction B. Stroke C. Heart Failure D. Pulmonary Edema E. Asthma F. Acute abdomen G. Diabetes	3			M.D.
13. Acute Medical Problems III A. Poisoning B. Drug Abuse C. Nosebleed D. Thermal Exposure E. Psychological Intervention	3	Film: "Psychoactive"		M.D.
14. Review	1	Written and practical exam	2	M.D.

Basic Emergency Medical Technician 5-31-407
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I - Instructor
M.D. - Physician

Lecture	Hours	Laboratory	Hours	Lecturer
15. Body Cavity and Genitalia Injuries A. Thoracic B. Abdominal C. Genitalia	2	Sucking Chest Wound Pneumothorax Flail Chest Open Abdomen	1	M.D.
16. Wounds, Burns, Eye Injuries A. Wounds B. Burn classes C. Eye injuries	2	Bandaging Eye Injuries Burns	1	M.D.
17. Fractures and Dislocations A. Fractures B. Sprains and Strains C. Dislocations	1½	Splinting Fractures Traction Splinting	1½	M.D.
18. Spinal and Head Injuries A. Anatomy B. Immobilization C. Alignment D. Transportation	1	Stablization Log rolling Back boarding Bandaging	2	M.D.
19. Initial Patient Assessment	1	Procedure Practice Film: "Five Minutes for Survival"	2	M.D.
20. Trauma Review		Practice skills	3	I
21. Review	1	Written and practical exam	2	M.D.
22. Movement of Patients A. Drags B. Lifts C. Carries	1	Lifts Drags Carries Ambulance	2	I

Basic Emergency Medical Technician 5-31-407
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I - Instructor
M.D. - Physician

Lecture	Hours	Laboratory	Hours	Lecturer
23. Extrication I A. Methods B. Aid before	2	Equipment Usage Film: "Extrication Rescue" "Collision Rescue" "Lifeline"	1	I
24. Extrication II A. Hazards	1	Methods Safety	2	I
25. Communications & Legality A. Radio Procedure B. Legal Problems	2	Radio Procedure Film: "Ambulance Run" "Police Pursuit"	1	I
26. Practical Review		Practice Skills	3	I
27. Written Final Exam	3			I
28. Practical Testing			3	I
29. Practical Testing			3	I
30. Final Examination Review Practical Testing	1		2	I
TOTAL HOURS	46		44	

NOTE: Licensure exam will be scheduled after end of course.

LABORATORY AND/OR CLINICAL COMPETENCIES:

1. Demonstrate with 100% accuracy the techniques used in airway maintenance.

   A. Head tilt, neck extension method
   B. Chin lift method
   C. Jaw thrust method
   D. Use of suction apparatus
   E. Use of laryngoscope and McGill forceps
   F. Insertion of an artificial airway
   G. Use of oxygen equipment

2. Demonstrate proper techniques in artificial resuscitation with 100% accuracy.

   A. Give mouth-to-mouth
   B. Give mouth-to-nose
   C. Give mouth-to-mouth and nose on infant
   D. Use the bag mask properly
   E. Expell air from the patient's stomach

3. Demonstrate proper technique in basic life support measures with 100% accuracy.

   A. Properly check the patient for breathing, heartbeat, discoloration, pupillary response.
   B. Initiate and continue 1 man CPR.
   C. Show ability to perform in either position in 2 man CPR
   D. Demonstrate proper CPR technique for an infant

4. Demonstrate measures used to prevent further blood loss or loss of effective circulating blood volume to 100% accuracy.

   A. Show various methods of controlling open hemorrhage
   B. Show how to treat a patient for shock
   C. Demonstrate proper technique for measuring blood pressure

5. Show how to assist normal childbirth using a manikin with 90% accuracy.

   A. Demonstrate sterile gloving technique
   B. Show how to massage a uterus just after the birth process

6. Demonstrate ability to treat burns and wounds of various types and classifications with 100% accuracy.

   A. Bandage incisions and lacerations

LABORATORY AND/OR CLINICAL COMPETENCIES (continued):

B. Show how to treat a patient with a penetrating object
C. Treat a third degree burn
D. Demonstrate treatment of a large foreign object in the eye
E. Treat for lacerated eyelid
F. Treat for lacerated globe of eye

7. Demonstrate ability to splint various fractures with 100% accuracy.

A. Use proper technique in splinting the humerus, radious, ulna, wrist, femur, leg, and ankle
B. Make proper use of traction splint, air splints, padded boards, cravats and sling

8. Demonstrate proper handling of the patient with a head or spinal injury with 100% accuracy.

A. Show proper use of a short board
B. Demonstrate log rolling technique
C. Show how to use a long board
D. Use a rope sling
E. Do bandaging of the head, neck, and for facial injury
F. Use head stabilization equipment such as blanket roll and cervical collar

9. Demonstrate proper methods of lifting and transporting sick and injured patients with 90% accuracy.

A. Use the: blanket drag
clothes drag
fireman's drag
pack strap carry
fireman's carry
B. Demonstrate safe transfer techniques such as bed to cot
C. Use the two-man pick-up and two-man seat carry
D. Do the two-man extremities carry
E. Demonstrate the chair carry up and down stairs
F. Use the four-man log roll in conjunction with the spine board
G. Properly use a scoop stretcher
H. Properly load and unload an ambulance
I. Use good body mechanics at all times

10. Demonstrate how to extricate a patient from a hazardous situation or entrapment, without causing further injury to him with 85% accuracy.

A. Demonstrate proper care before beginning extrication
B. Demonstrate proper use of light extrication equipment

LABORATORY AND/OR CLINICAL COMPETENCIES (continued):

C. Show ability to detect a hazard to the EMT and/or the patient; such as fire, fumes, falling structures, electricity

11. Demonstrate ability to communicate via two-way radio using accepted procedure and language with 85% accuracy.

A. Use dispatch and EMS frequencies.

A P P E N D I X K

SIXTH AND VINE STREETS LA CROSSE, WISCONSIN 54601

western wisconsin technical institute

CHARLES G. RICHARDSON, DISTRICT DIRECTOR • TELEPHONE 608/782-6238

Dear Emergency Medical Technician:

We are asking you to help us determine the need for an expanded educational program for EMT students in the Western Wisconsin Technical Institute district. Two of the areas we are exploring are the development of a diploma level preservice program and the modules of the paramedic program.

It is exceedingly important for you to return this questionnaire within five days. Simply insert it in the enclosed envelope and drop it in the mailbox.

Thank you for sharing your ideas with us.

Sincerely,

William C. Gaumer, R.N.
Program Head
Emergency Medical Technician Program

WCG:kk

Enclosure

EMT SURVEY QUESTIONNAIRE

1. How long have you been an EMT? _____ years _____ months

2. Your age _____.

3. Your highest level of formal education _____

4. What is your regular occupation? _____

5. What is your employment status as an EMT? Full time _____

   Part time _____

   Paid Volunteer _____

   Unpaid Volunteer _____

6. Was your basic EMT training adequate? Yes _____ No _____
   If no, please comment.

7. One possibility in expanding the EMT program is to offer fulltime, diploma level, preservice program. By making the program preservice, it would guarantee that the ambulance attendant is proficient in patient care before he has patient care responsibilities. Do you feel it would be practical to offer a preservice, fulltime diploma program in basic emergency medical technician training in the Western Wisconsin Technical Institute district? Yes ____ No ____
   Please comment on your choice.

8. If the diploma program were offered, would you want the present extension course to remain available? Yes _____ No _____

9. If certain modules of the paramedic course were available in the district, which ones do you feel you would need and would use in patient care activities. Please prioritize your choices with number one being the most important to you.

   _____ Shock and Fluid Therapy
   _____ General Pharmacology
   _____ Emotionally Disturbed Patients
   _____ Extrication/Rescue Techniques
   _____ Human Systems and Patient Assessment
   _____ Respiratory Problems
   _____ Cardiovascular Problems
   _____ Soft Tissue Injuries
   _____ Musculoskeletal Injuries
   _____ Medical Emergencies
   _____ OB-Gyn Emergencies
   _____ Pediatrics and Neonatal Transport
   _____ Telemetry & Communication
   _____ Central Nervous System Problems

EMT Survey Questionnaire
Page 2

10. Please specify any courses in emergency medical services you want offered in the Western Wisconsin Technical Institute district.

11. What topic areas do you want covered in 1½ day seminar format this year?

12. In what months do you want seminars offered?

A P P E N D I X L

SIXTH AND VINE STREETS LA CROSSE, WISCONSIN 54601

western wisconsin technical institute

CHARLES G. RICHARDSON, DISTRICT DIRECTOR • TELEPHONE 608/782-6238

Dear

We are conducting this survey to determine the future educational needs of emergency medical services personnel. Basically we are speaking of three levels of EMS personnel as outlined here.

First Responders - Those public safety or health care personnel who are routinely first on the scene of an accident or illness. These people are responsible for stabilizing and treating victims until an ambulance arrives.

Emergency Medical Technician - The ambulance attendants who are responsible for rendering pre-hospital emergency care at the scene and enroute to a medical facility.

Paramedic - An Emergency Medical Technician with advanced skills, especially in coronary care.

We thank you for completing the enclosed survey. Simply insert it in the enclosed envelope and drop it in the mail within the next five days.

Sincerely,

William C. Gaumer, R.N.
Program Head
Emergency Medical Technician Program

WCG:kk

Enclosure

PHYSICIAN AND NURSE
SURVEY QUESTIONNAIRE

1. Do you have frequent professional contact with Emergency Medical Technicians? Yes _____ No _____

2. On the average, are you satisfied with the treatment they give patients? Yes _____ No _____
If no, please comment.

3. Do you understand the role and responsibilities of the E.M.T.?
Yes _____ No _____

4. Presently E.M.T.'s are trained in a 90-hour training course. Do you believe this is adequate? Yes _____ No _____

5. One possibility in expanding the EMT program is to offer fulltime, diploma level, preservice program. By making the program preservice, it would guarantee that the ambulance attendant is proficient in patient care before he has patient care responsibilities. Do you feel it would be practical to offer a preservice, fulltime diploma program in basic emergency medical technician training in the Western Wisconsin Technical Institute district? Yes _____ No _____
Please comment on your choice.

6. If the diploma program were offered, would you want the present extension course to remain available? Yes _____ No _____

7. Do you feel the 750-hour paramedic program should be offered in the Western Wisconsin Technical Institute district? Yes _____ No _____

8. Do you feel only certain portions of the paramedic course should be offered? Yes _____ No _____ Please specify which portions below:

_____ Shock and Fluid Therapy
_____ General Pharmacology
_____ Emotionally Disturbed Patients
_____ Extrication/Rescue Techniques
_____ Human Systems and Patient Assessment
_____ Respiratory Problems
_____ Cardiovascular Problems
_____ Soft Tissue Injuries
_____ Musculoskeletal Injuries
_____ Medical Emergencies
_____ OB-Gyn Emergencies
_____ Pediatrics and Neonatal Transport
_____ Telemetry & Communication
_____ Central Nervous System Problems

APPENDIX M

EMT SURVEY QUESTIONNAIRE

1. How long have you been an EMT? 3 years 1 months. = $\overline{x}$

2. Your age 35 = $\overline{x}$

3. Your highest level of formal education 13.75 yrs. = $\overline{x}$

4. Your regular occupation.

Computer operator	Store owner (3)
Architect	Manager of store
Police officer (6)	Ambulance attendant (2)
Cheese maker (2)	Ambulance service provider
News writer	Draftsman
Welder	Pastor (2)
Speech pathologist	Laborer (2)
Postal worker	X-ray technician
Registered nurse (6)	Nursing assistant
Student (4)	Mechanic (2)
Bookkeeper	Emergency medical technician (2)
Licensed Practical Nurse (3)	Operating room technician (2)
Crew foreman	Mortician
Housewife (4)	Dairy plant manager
Resp. Therapist	Insurance agent
Nursing home administrator	Fire fighter administrator
Tax Representative	Metal fabricator
Construction engineer	Stain glass fabricator

5. What is your employment status as an EMT? Full time 7 (10.8%)

Part time 14 (21.5%)

Paid Volunteer 30 (46.2%)

Unpaid Volunteer 14 (21.5%)

6. Was your basic EMT training adequate? 62 (95.4%) Yes 3 (4.6%) No

Comments: No defensive driving, inadequate extrication training. (2)
For my locale, it was adequate.
Should be stressed that classroom work is much different from the real thing.
At present time, more is needed.
Was adequate, keeping in mind the limits of our equipment and use.

EMT Survey Questionnaire
Page 2

7. One possibility in expanding the EMT program is to offer fulltime, diploma level, preservice program. By making the program preservice, it would guarantee that the ambulance attendant is proficient in patient care before he has patient care responsibilities. Do you feel it would be practical to offer a preservice, fulltime diploma program in basic emergency medical technician training in the Western Wisconsin Technical Institute district?
37 (56.9%) Yes 28 (43.1%) No

Comments: Many have full-time jobs and couldn't afford the time. (10)
Theory is good but I wonder if people would devote the time to a career that is mainly volunteer in this area. (5)
Further refresher courses would be easier to attend.
A practical full-time program would enable other EMT's to receive competent training in our community. (3)
The little amount of non-emergency type patient care can easily be learned on the job.
For best patient care - train before working. (3)
Depends on the employment situation and job possibilities.
Would upgrade services.
If a diploma program is set up, it should be an advanced EMT, Paramedic program.

8. If the diploma program were offered, would you want the present extension course to remain available? 64 (98.5%) Yes 1 (1.5%) No

9. If certain modules of the paramedic course were available in the district, which ones do you feel you would need and would use in patient care activities? Please prioritize your choices with number one being the most important to you.

3 *	Shock and Fluid Therapy	9	Soft Tissue Injuries
14	General Pharmacology	7	Musculoskeletal Injuries
13	Emotionally Disturbed Patients	4	Medical Emergencies
		8	OB-Gyn Emergencies
5	Extrication/Rescue Techniques	12	Pediatrics and Neonatal Transport
6	Human Systems and Patient Assessment	11	Telemetry & Communication
2	Respiratory Problems	10	Central Nervous System Problems
1	Cardiovascular Problems		

Comments: All these areas are needed. (3)

* Composite Rankings

EMT Survey Questionnaire
Page 3

10. Please specify any courses in emergency medical services you want offered in the Western Wisconsin Technical Institute district.

I.V. Therapy (14)
Emergency OB (2)
Human Relations (2)
EMT Refresher Courses (4)
Cardiovascular Problems (5)
Telemetry
Course for Recertification (2)
Water Rescue (3)
EKG Monitor Reading (3)
General Pharmacology (3)
Airway Management

11. What topic areas do you want covered in 1½ day seminar format this year?

Cardiac Care (16)
Extrication (11)
Legal Problems (4)
Emergency Driving (4)
Respiratory Problems (12)
Patient Assessment (9)
Burns (3)
Fractures (3)
Communications (5)
Bandages/Splinting (2)
Shock & Fluid Therapy (16)
Medical Emergencies (5)
Poison Assessment (3)
Pediatric Emergencies (3)
Triage (3)
Head/Neck/Spinal Injuries (2)
Farm & Industrial Accidents (3)
Trauma Patient (3)
Patient Care in Disaster Situations (3)
Diabetic Shock

12. In what months do you want seminars offered?

Winter (15)
Spring (12)
Fall (19)
Summer (5)
January (5)
February (4)
March (7)
April (20
May (0)
June (3)
July (3)
August (4)
September (7)
October (9)
November (3)
December (1)
No preference (6)

PHYSICIAN AND NURSE
SURVEY QUESTIONNAIRE

1. Do you have frequent professional contact with Emergency Medical Technicians?
   17 (100%) Yes 0 (0%) No

2. On the average are you satisfied with the treatment they give patients?
   16 (94.1%) Yes 1 (5.9%) No

   Comments: La Crosse service seems to be better than rural area.
   I would like to see them be able to do more skills.

3. Do you understand the role and responsibilities of the E.M.T.?
   17 (100%) Yes 0 (0%) No

4. Presently, E.M.T.'s are trained in a 90-hour training course. Do you believe this is adequate?
   12 (70.6%) Yes 5 (29.4%) No

   Comments: Depends on person taking it (2)
   Retraining for 8-10 hours each year should be mandatory.

5. One possibility in expanding the EMT program is to offer fulltime, diploma level, preservice program. By making the program preservice, it would guarantee that the ambulance attendant is proficient in patient care before he has patient care responsibilities. Do you feel it would be practical to offer a preservice, fulltime diploma program in basic emergency medical technician training in the Western Wisconsin Technical Institute district?
   15 (88.2%) Yes 2 (11.8%) No

   Comments: EMT's should be proficient in their responsibilities before assuming patient care. (3)
   If the extensive program is required - salaries will need to be adequate to cover advanced education. (2)
   Let them work with an experienced person and train at the same time.

6. If the diploma program were offered, would you want the present extension course to remain available?
   9 (52.9%) Yes 8 (47.1%) No

7. Do you feel the 750-hour paramedic program should be offered in the Western Wisconsin Technical Institute district?
   14 (82.4%) Yes 3 (17.6%) No

   Comments: Considering the bluffs, rivers and ski area accidents, it would seem beneficial to all the surrounding communities.

Physician and Nurse
Survey Questionnaire
Page 2

8. Do you feel only certain portions of the paramedic course should be offered?
13 (76.5%) Yes 4 (23.5%) No Please specify which portions below:

Comments: Some training in each of these areas is necessary, but not an extensive course.
If you offer a paramedic course, it should be complete. (2)

11*	Shock and Fluid Therapy	11	Soft Tissue Injuries
7	General Pharmacology	12	Musculoskeletal Injuries
11	Emotionally Disturbed Patients	12	Medical Emergencies
		9	OB-Gyn Emergencies
12	Extrication/Rescue Techniques	9	Pediatrics and Neonatal Transport
7	Human Systems and Patient Assessment	13	Telemetry & Communication
11	Respiratory Problem	6	Central Nervous System Problems
12	Cardiovascular Problem		

* Number of positive responses