CHAPTER 5 : EMS TRAINING PROGRAM

5.1. Introduction

The Emergency Medical Services Training Program (EMSTP) is an essential component of the EMS system. In a highly service oriented sector such as health it is very important that the input of human resource component is well planned and implemented in order to start, consolidate and sustain the functioning of the EMS system.

In all hospitals of the country, Bhutan, EMS is provided as part of the general health care. As the country makes rapid strides into the modern era of modernization, the need to improve the quality of emergency medical care has been felt both by the providers and the clients. Therefore, in an attempt to improve EMS in eastern Bhutan, it is proposed to establish an EMS system in MRRH.

The EMSTP will remain an integral component of the EMS system . This EMSTP, as it starts with the training of hospital nursing staff and paramedics (HA, NMS, Eye and Dental Technicians who are involved in taking health care into the communities) is designed to make a beginning in upgrading the knowledge and skills in the management of emergencies.

5.2. Program Objectives

(i). To upgrade the knowledge and skills in EMS

(ii).To provide technical support in pre-hospital emergency medical care

5.3. Background

The shortage of qualified manpower is a national problem in Bhutan. Although there has been a steady improvement of the situation over the last few years it is certain that the human resource constraint in health will continue to be a problem for sometime in future (see Appendix E on page 188 for Bhutan's manpower requirements of Health Services). The Annual Health Bulletins of the last four years show that the gap between the existing health staff and the additional requirements have remained consistent throughout the period. This is not to say that the Health Division in the Ministry of Health and Education does not have a Human Resource Develop (HRD) Plan.In fact Health Division does have a modest, if not an ambitious Health Manpower Plan reflected in the overall National HRD Plan.However, during the initial phase of the HRD Plan implementation phase, the Health Division was unable to recruit required number of candidates because of other competing Government Agencies which provided more lucrative careers to the candidates. But at this stage it is not possible to recruit any additional health personnel for delivering

EMS as a separate, independent staffing for the EMS system. There is no need for it either.

5.4. Rationale

Presently, emergency medical care, in some form or the other, is provided by all health care providers on an ad hoc basis. This is to say that, although EMS is rendered on a case-by-case basis, there is no functioning EMS system in MRRH. Understandably, the hospital authority is not prepared to tackle emergency medical situations that demand immediate pooling of health staff, expertise, equipment and transport, and coordinating activities. This is specially true during major automobile accidents. The response to such a medical emergency situation is at best very haphazard and at worst, no action is taken at all.

In keeping pace with the socio-economic development taking place in the region, health authority must be prepared for increasing number of emergencies.The demands placed on health care professionals in terms of providing emergency medical care is often quite unprecedented given the shortage of health staff and lack of knowledge and skills in EMS. However, if proper training in EMS through continuing education is given to the existing health staff, it will go a long way to meet the people's demands for prompt and proper emergency medical care.

During disaster emergency medical situations the delivery of EMS is complex. Indeed it is complex because it involves many diverse organizations or individuals requiring coordinated and cooperative interactive response to a singular situation in which health authority assumes the leading responsibility. The fact that the disaster situations call for multidisciplinary activities, the delivery of optimum care depends on how well these activities are integrated under the medical direction (American College of Emergency Physicians Disaster Committee, 1985). Therefore, it is important that the EMS training defines the roles and responsibilities of the health staff and other organizations in the management of the emergency health care.

According to Murphy (1978), people expect emergency health care to be given promptly whenever they need it, but least bothered as to under what strains and stresses EMS are delivered.

As people become increasingly health conscious emergency visits to hospital are also seen on an increasing trend. The trauma cases, usually the motor vehicle accident cases, calls for more and more pre-hospital EMS care which the hospital is not able to live up to the expectations due to lack of trained manpower and logistic support. Providing emergency life support in sudden cardiac arrest and traumatic cases saves lives (Lilja & Swor, 1996). It is hoped that this training program which will be conducted within the existing shortcomings, will enhance the hospital's performance in providing EMS care and save lives while at the same time helping to consolidate and sustain the EMS system in MRRH.

5.5.Training Modalities:

The EMS Training curriculum is designed for nurses and paramedics of MRRH in the care of cardiac and trauma cases.The training will be conducted in winter season during which the patient load is at the minimum. It will be conducted in 2 groups of about 10 participants at a time over a one week period so that the hospital function is not hampered.

The training will be conducted by the Specialists and Junior Doctors of MRRH. However, there will be no Trainers' Training Course because the training is to be conducted informally as inservice refresher course, and as such, there will be no certification of the course. The trainers are, never the less, expected to prepare themselves according to the lesson plan and follow the training manual for the one week course which will be prepared, tailored to the participants' learning needs and retention capacity. For the three week course, the trainers will follow the training modules of the EMT-BASIC: National Standard Curriculum of the United States Department of Transportation National Highway Traffic Safety Administration.

Since the trainees are of adult groups, some of whom are quite senior in the job, the teaching and learning process will be of a two-way communication skills and discussion, aided by overhead projections of slides and transparencies, demonstrations, laboratory and simulation practices, and if available, audio-visual presentations.

The training will be conducted on experimental basis as Pilot EMSTP. Therefore, the curriculum is subject to changes as and when necessary.

5.6. Development Of Ems Training Curriculum:

The curriculum for the one week course is designed from Basic and Advanced Pre-Hospital Trauma Life Support (1994), Text Book of Basic Life Support for Health Care Providers (1994), Instructor's Manual for Basic Life Support (1994) and Pre-Hospital Emergency Care: Crisis in Intervention (1989).

The curriculum has been developed in consultation with Dr. Somchai Kanchanasut, Director of the Emergency Department (ED) at Rajavithi Hospital in Bangkok, who is also my external advisor for my Portfolio Thesis. Dr. Somchai, in his capacity as a Director of the ED, is also in charge of the development of the EMS system which is established in Rajavithi Hospital as a Pilot Project. He has provided me most of the reference materials for my curriculum development.

5.7. Course Objectives

(i).To provide an overview of anatomy and physiology of major body systems and their functions.

(ii).To update the knowledge and skills in Basic Life Support

(iii).To provide technical skills and competency in performing Cardiopulmonary-nary Resuscitation (CPR), Foreign Body Airway Obstruction (FBAO).

(iv).To provide practical proficiency in the use of necessary equipment and instruments.

(v).To prepare for effective response to pre-hospital cardiac and trauma emergency care.

(vi).To provide Basic Life Support as an interim measure until the institution of Advanced Life Support.

(vii).To render assistance to Doctors in the management of Intensive Care Unit (ICU) and Trauma Unit.

(See Appendix O on page 227 for the course design)

5.8. Training Evaluation

The trainees will be assessed daily after completion of each session by the concerned resource person by grading on the scale of 1 to 3 for their cognitive, affective and psychomotor objectives. The interpretations of the grading scale are as follows:

Grade 1 : Good

Grade 2 : Satisfactory

Grade 3 : Unsatisfactory

(see Appendix M for specimen of the daily assessment form).

5.9. Training Program Evaluation

The evaluation of training program is an essential component of the training program development. The main objective of it is to assess the performance of the trainers and program organizers, and obtain ideas about bringing improvements in the future courses.

The trainees will be asked to evaluate the training program at the end of the training session so that the organizers receive immediate feedback from the trainees in terms of the educational and administrative aspects of the training program. This feedback will be a valuable input for improving the future training courses (see Appendix N on page 224 for specimen of training program evaluation form).

5.10. Training Program Schedule:

The training will be conducted for nurses and paramedics of MRRH in winter during which patient load is minimum. There will be 2 groups of about 10 participants

with each group. Separate groupings are made so that routine hospital functions are disturbed least. Sessions for both groups will be conducted by the same resource persons.

The training date may be fixed as per the convenience of hospital administration. There will be 2 sessions (afternoon sessions and evening session) in a day for all 7 days of the training period, starting from 8.00 AM to 5.00 PM with 1 hour lunch break, and 15 minutes tea break in the morning and afternoon. (See Appendix P on page 235 for EMSTP schedule.)

5.11. Budget

The success and failure of EMSTP will depend directly on how much money can be invested into this program. Training entails high expenditure, and this EMSTP is no exception. It is intended to pay very high dividends in terms of improved emergency medical care to the people.

As it is true for most training programs, EMSTP incurs high expenditure. The budget estimate for this training course is prepared on the basis of running costs which includes perdium (calculated at existing Government rate) for participants and resource persons, refreshments, working lunch, stationaries and miscellaneous expenses.

The budget will have to be sought from the Health Division. It is expected that the Health Division will entertain the budget request because in-service training programs are high priority areas.

There is another expenditure for EMSTP, which will have to be proposed to the Health Division separately, i.e. procurement of a MINIKIN. MINIKIN is the main teaching aid material for providing effective training on Basic Life Support, the training that is scheduled for nurses and paramedic staff of MRRH. In fact, according to Dr. Somchai Kanchanasut, Director of Emergency Department, Rajaviti Hospital, Bangkok, MINIKIN is one of the most important training equipment in Basic Life Support. The cost of a MINIKIN in Thailand is about US 1920 dollars.

The expenditure estimate, given in the table below, is prepared as per the existing entitlements and allowance defined in the Government financial rules and regulations. However, payment of perdiem is payable only when employees are performing their duties outside 10 kilometers distance from the station. In other words, resource persons and participants will not be entitled to perdiem payment if training is conducted in MRRH. It is also true that if some financial benefit is not considered, resource persons and participants alike, do not show interest in the training. Therefore, some managerial adjustments will be made so that trainers and trainees receive their perdiem payment, and make the training ore meaningful and useful.

Table 5.1 : Budget Estimate for EMSTP

PARTICULARS	AMOUNT (NU)	REMARKS
Perdiem for trainees	20x75x7=10500/-	@ Nu 75/- per day for 7 days for 20 trainees
Perdiem for trainers	14x120x7=11760/-	@ Nu 120 per session for a total of 14 sessions
Refreshments	75x2x7+3x2x7x20=1890	@ Nu 3/- per tea cup & Nu 75/- for 3 packs biscuits twice a day for 20 heads for 7days
Working lunch	75x20x7=10500/-	@ Nu 75/-`per meal for 20 heads for 7 days
Stationaries	5000/-	----------
MINIKIN	69120/-	@ US $ 1920 in Thailand
TOTAL	108770/-	

NOTE: US $ 1.00 = Bhutan currency NU (Ngultrum) 36.00

5.12. Conclusion

The week long EMS training in Basic Life Support in emergency cardiac and trauma care is a modest beginning in instituting EMSTP in MRRH.It is hoped that by undertaking this training, it will go a long way in equipping health professionals of

MRRH in providing improved emergency medical care to the people of eastern region. It is also hoped that this first training will help in planning and conducting future EMS training for other categories of health providers in the district.

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