Middle Articles

ASPECTS OF EMERGENCY CARE

First-aid Training

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The fact that the teaching of first-aid has been largely in the hands of the voluntary associations has tended to raise the subject from its simple context and transform it into a specialty whose practitioners are trained to agreed standards, obtain certificates, and, when on first-aid duty, wear uniform. First-aiders have thus become a select group within the community, which gives rise to the popular belief that only members of this group are competent to give first-aid treatment.

Ideally everyone should be trained in first-aid. It is, however, physically impossible for more than a limited number to be given formal courses and to gain certificates. This is not a very satisfactory situation, especially as recently the national conscience has been stirred by the publicity given to accidents and the human suffering and economic loss they involve.

Accidents account for over 20,000 deaths a year in Great Britain, with, in addition, 300,000 persons seriously injured and 5 million hurt. The estimated cost to the nation is £500 m. lost in earning power, productivity, medical expenses, and compensation. This means that every minute there are ten persons needing first-aid treatment and £1,000 goes "down the drain." A further significant factor is that of this large toll of accidents 40% occur in road accidents in full view of the public, are dramatic in nature, and widely reported in newspapers, radio, and television.

Early and efficient first-aid, though basically having no effect in preventing accidents, would significantly reduce the death rate, improve the degree and speed of recovery of the injured, and save a great deal of money. It is therefore essential to widen the availability of first-aid treatment. To do this first-aid must be defined, the needs for various standards of training studied, and the resources available to give such training assessed.

What is First-aid?

First-aid is commonly defined as the "immediate assistance given in the case of injury or sudden illness by a bystander or other lay person before the arrival of expert medical aid."

From this definition certain significant points arise. The bystander who gives the immediate assistance is, in most cases, untrained in what is commonly regarded as first-aid. Nevertheless, whatever he does—for better or for worse—is in fact "first-aid." In every case the effectiveness of the first-aid treatment given will depend on the skill of the persons present at or first on the scene of the accident or sudden illness. If he or she is trained in first-aid so much the better. The expert medical aid, which normally will arrive sooner or later, may be in the person of a voluntary first-aid worker, a professional ambulance team, or, less frequently, a doctor. This expert

medical aid, sometimes called "intermediate aid," is not the final treatment of the injury or illness but an improvement and continuation of the first-aid until the care of the patient is taken over by the casualty department of a hospital or by the general practitioner at home. It follows that, if confusion is to be avoided by the introduction of additional terms, the definition of first-aid should thus be enlarged to: "First-aid is the immediate assistance given in the case of injury or sudden illness by a bystander or other lay person with such further expert help as may be available until the patient reaches hospital or other source of professional treatment."

From this definition two further observations may be made on which the present concept of first-aid training should be based. Any person injured or taken ill suddenly would hope, and might even expect, to be given immediate and effective first-aid by anyone near by. No one, however, should expect this, unless that person is also competent and willing to give useful first-aid should he or she be the first arrival at the scene of an accident or sudden illness. It is thus essential and indeed a moral obligation for every individual to be prepared for such an event. Furthermore, first-aid is no more than an intermediate procedure bridging the gap between the injury or illness and initiation of professional treatment. Hence the initial treatment must be simple as well as effective, and the enthusiastic first-aid must remember that the hospital doctor receiving the patient will need to remove dressings and splints to carry out his examination and begin final treatment.

First-aid is thus a branch of medicine in which the whole of the population should have some basic knowledge, as many as possible should be given some formal training, and a limited number be highly skilled.

Whom to Teach

At present, in most cases, first-aid is given by an inexperienced layman. The urgent need today is that every man, woman, and child should know what to do—if faced with an accident or sudden injury—to save life; protect a casualty from further injury, prevent the injury or illness becoming worse; and to obtain expert help. To achieve this goal is the immediate and essential requirement in first-aid training.

Members of the public trained in these basic principles should be encouraged to take further formal training. Everything they can learn over and above these may one day be of use in treating the acutely ill or injured. There is more to first-aid practice than saving of life. The effectiveness of early treatment will be reflected in a speedier and more complete recovery with less discomfort to the patient. Training in first-aid is thus progressive. The more time an individual is prepared to devote to training, the greater will be the skill acquired. If instruction is properly graded the student may stop at any time, or if interest and experience grow he may

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volunteer for special service or advanced instruction with the established first-aid organizations. Others will specialize in particular aspects of first-aid associated with the home, the factory, various sports, or adventure activities.

In addition to the volunteers, good first-aid training should be given to professional ambulance personnel, police, firemen, and other public servants. Furthermore, all doctors, nurses, medical technicians, and orderlies should receive advanced instruction in first-aid as early as possible during their professional training. Of those trained in first-aid a growing number will have to accept further responsibility and become instructors in the subject.

Training Programme

First-aid must be taught as a positive branch of medicine and as an investment for efficiency. Compassion is as important as skill and the first-aid box must be looked on as the "human repair kit." The minimum instruction, which should be available for every man, woman, and school child, must cover the basic principles of maintaining an adequate air supply, controlling haemorrhage, and caring for the patient.

The larger voluntary teaching organizations have their own admirable and adequate courses, but progressive series of courses leading naturally one into the other could be carried out on the following lines.

Life-saving Course

A programme of basic instruction should be available for every member of the community. It is possible within two hours—by means of films, models, posters, and illustrated hand-outs—to teach airway maintenance, restoration of breathing, control of bleeding, and casualty management. Motoring organizations (including driving schools), women's institutes, works committees, sports clubs, etc., should ensure that such a basic course is available for their members. Every effort should be made to enrol the assistance of the mass media—newspapers, radio, and television. Furthermore, elementary instruction in life-saving techniques should be part of the highway code as well as incorporated into the codes of practice of various industries and recreations. Instruction in heart compression should be made as freely available as teaching facilities allow.

General First-aid

A comprehensive course for volunteers, and others wishing to become usefully competent, could be based on nine two-hour periods, with good illustrations and practical instruction (see Table).

Advanced First-aid

For those wishing to acquire further skill or having some occupational or recreational commitment which demands special responsibility in first-aid of a high standard instruction in rescue and survival techniques and the control of mass casualties could be given (see Table). Attachment to working emergency services—for example, ambulance depots, hospital casualty departments, and treatment centres—should form an essential part of this course. Those attending should become familiar with mechanical aids to resuscitation, cutting and lifting gear, stretchers, ambulance equipment, accident investigation and reporting, and the organization of national accident facilities.

Special Courses

Many situations exist where, in addition to general first-aid requirements, the hazards of the environment demand additional knowledge. Thus people engaged in mountain rescue work, skin diving, exploring, and certain other sports or out of the ordinary adventures should be enabled to undertake additional special studies. They should be trained in recognized codes of safety practice, know the specific hazards involved, and be able to act accordingly. Knowledge of first-aid which is relevant to these situations is an investment towards the success of the mission and the survival of those involved. It can, however, only be taught by those with knowledge and experience in these particular fields.

Courses for Professionals

Medical personnel have the advantage that any advanced first-aid training is built on a foundation of professional knowledge and experience. Unfortunately, it is often taken for granted that medical training automatically produces a good first-aider. This is not true. Doctors and personnel in the rescue services have much to learn in accident management. Their ability to deal with accidents on site, particularly major incidents producing many casualties, depends largely on their knowledge of additional skills. In many cases a long and un-

Progressive First-aid Instruction

Course	For Whom	Content
1	Everyone (including school children)	Maintenance and restoration of breathing Control of bleeding Care of the casualty
2	Willing and intelligent adults	Above plus heart compression Above plus: Introduction to the working of the human body Respiratory and cardiac resuscitation Bleeding, shock, and special wounds Casualty management and the illness of injury
3	Volunteers for and those needing general first-aid knowledge	Unconsciousness Fractures, dislocations, and sprains Exposure and environmental injuries Poisons and drug emergencies Sudden illness
4	Those wishing or needing advanced instruction	Revision of above with greater detail, adding maternity and psychiatric emergencies and drowning Advanced bandaging and splinting Rescue and survival Mechanical aids to resuscitation The administration of oxygen Stretchers and transport of injured Ambulance and first-aid post equipment Injuries of special regions Radiation injuries
5	Those with special requirements, e.g., expedition leaders, sports clubs, recreational sailors, divers, explorers, factory workers, parents, school teachers, physical training instructors, swimming bath attendants, etc.	Courses 3 or 4 plus selections from the following as required: Injuries and acute illness in adverse conditions Sports injuries, general and specific Accidents at sea and in inshore waters Underwater accidents Industrial accidents, general and specific Injuries to children and old people, etc.
6	Professionals: Police, firemen, ambulance personnel, lifeguards, nurses (male and female), medical students	Courses 3 and preferably 4 plus (as appropriate) Rescue and retrieval techniques Mass casualty management Organization in major disasters Provision of relief services (water, food, shelter, clothing, medical supplies, etc.) Accident investigation Management of, and establishment of, emergency casualty centres Assistance in hospital casualty departments and wards
7	Doctors	Should be familiar with contents of Courses 1 to 4 and have working knowledge of remainder: Skill in conduct of on-site emergency treatment including tracheostomy, intubation, oxygen administration, plasma or equivalent transfusion, and amputation Use of C.O.N. anaesthetic apparatus Use of emergency drugs Organization for group accident and emergency medical service Casualty management and follow up Should be prepared to teach

comfortable journey to hospital may be delayed until shock has been controlled and the patient's condition improved. Furthermore, skilled medical personnel are better able to consider an injury as affecting the whole body physically and emotionally and to instil calm and confidence into a situation of potential chaos.

The Role of the General Practitioner

Doctors and their assistants should form group emergency services with good communications, adequate transport, and close liaison with the police and rescue services. By joint consultation they should establish agreed courses of instruction and standardize equipment for ambulances and first-aid centres, possibly with some variation depending on local needs. Furthermore, it would be of great service to the community if, when called to an accident, doctors could—after giving priority treatment to the injured—study the accident itself, its causes and results. This should be done not so much from the mechanics of the accident and the legal aspects of responsibility, which is primarily a police duty, but from the human and medical angles of those concerned. Much more needs to be known about accident proneness, risk acceptance, and the personal, environmental, and chance factors involved. Such investigations will contribute to accident prevention, and a follow-up of the patient's progress will establish the efficacy or otherwise of the first-aid treatment given.

The Teacher

Ideally the general practitioner should be taught to teach, but there is no substitute for a sound knowledge of the subject and an enthusiasm to pass on that knowledge to others. Very many visual and practical teaching aids are available and should be used, particularly in practical periods, but these cannot replace the personality of the teacher. Patient planning and preparation, even for separate lectures on the same subject, are essential. Finally, there is nothing better than first-hand experience for gaining skill and knowledge. To achieve this it will be necessary to persuade the emergency services to take trainees along with their calls and let them also assist at hospital casualty departments.

First-aid in the Future

What has been written already is no more than a proposal to spread a minimum of first-aid instruction throughout a community which badly needs it—a "crash course" on a national scale. In the future such knowledge must be acquired in school as an essential part of training for citizenship in a country where accidental injury and illness are common occurrences. In other words, progressive instruction in simple human science, first-aid, rescue, and survival techniques should be provided. A select committee of doctors and educationists should be formed without delay to study what is already being done in this direction in schools, colleges, and universities, and make recommendations for future action.

Programme for Specialization in Family Medicine

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Summary: A programme for specialized training in family medicine at Tel Aviv University Medical School provides four years of postgraduate study, two of which are in recognized hospital departments and two in clinics recognized for training in family medicine. At the end of this four-year period the graduate must submit a thesis of original work or an approved research project on an aspect of family medicine. Continuing contact of the trainee with both the family medicine clinic and the hospital departments is maintained throughout the period. While in hospital the trainee spends half a day a week in the family clinic with his personal tutor, and when in the clinic he spends half a day a week in the hospital.

This programme has been provisionally accepted as meeting the formal requirements of the Israel Medical Association for specialization in family medicine, and the first physician has started training.

Introduction

In many countries there has been a resurgence of interest in family- and community-orientated health services, stemming from the physicians themselves and from the general popula-

tion, who are beginning to recognize and demand their rights to good medical care. An interesting concomitant phenomenon has been the growing demand of American medical students for more community-based teaching services.

All recently published reports emphasize the need for a "primary physician" (American Medical Association, 1966) or a "family physician" (Royal Commission on Medical Education, 1968). Nevertheless it has been predicted that the demise of the individual practitioner (Royal Commission on Medical Education, 1968) will result in his replacement by a more specialized family physician. He will be a member of a group practice or the leader and co-ordinator of a multi-professional team of health workers, maintaining close contact with a hospital. "A primary care team rather than a primary care man is needed" (Anderson, 1969).

Parallel to this has been the realization that medical school education must be linked very closely to the objectives of the community health services. The interrelated triad of research, education, and medical care (service) must be co-ordinated if the tremendous advances in medicine and related sciences are to reach the general population in a rapid, efficient, and humane manner.

For some years now (Britain started experimenting in 1948) (Horder, 1968) a great deal of attention has been paid to the improvement of the standards of practising physicians and to vocational training or specialization courses (World Health Organization, 1963 ; Royal College of General Practitioners, 1965, 1967a, 1967b). Certain parts of the world, such as Yugo-

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