Health Security for British Columbians

Tome Four

Special Problems: Teaching Hospitals, Laboratories, Emergency Services, Rehabilitation, Workmen's Compensation, Environmental Health, Prevention, Nutrition

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The Report of Richard G. Foulkes, B.A.,M.D.,F.A.P.H.A.
to the Minister of Health, Province of British Columbia

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A division of emergency medical services should be created and given responsibility for all aspects of emergency care. A director should be appointed, preferably a physician, and he must have opportunities to travel so that he has access to current thought and experience in what is essentially a new branch of medicine from a practical point of view.

<u>Ambulance Services</u>

The Ambulance Service Act was promulgated June 18, 1973, and requires registration of all ambulance services by September 18, 1973. At the same time, operators have been asked to answer a questionaire relating to their services.

The ambulance must be considered a mobile extension of the emergency room of a hospital and must therefore provide as far as possible an equal standard of medical care.

We envision an ambulance service organized throughout the Province financed by the Provincial Government. Standards for equipment and training are recommended applicable to the whole Province.

We envision each region being responsible for the daily operation of ambulance services in its area but there must be essential supervision at a Provincial level as regards standards, training and types of equipment. Policy should be set at a Provincial Level and not a regional level. It should not be possible for one region to provide a higher standard of care than another region by a diversion of funds either to or from the service. Three levels of training are specified:

Level One. Industrial First Aid - 50 hours plus 80 hours of special mobile training to be completed within 18 months of a decision being taken to implement this idea. This is to be a basic requirement of all ambulance services throughout the Province and the training programme should be initiated as an urgent matter.

Level Two. To be initiated at the same time as Level One or to follow on after Level One, but in any event, Level Two is to be the objective of all services after having achieved Level One. It should very rapidly become the standard throughout the Province and is equal to what is now presently provided by Metropolitan Ambulance Company in Vancouver. It consists of six weeks further training being given to holders of Level One.

Level Three. This is the ultimate level. The syllabus is yet to be written but it will probably take one year to do the training. It is aimed to produce something along the lines of a service paramedic exceedingly well skilled in a narrow field of life support capable of intravenous therapy, drug administration, defibrillation, resuscitation, and provision of considerable emergency care until arrival of a physician.

This individual is the type who would be of particular value in remote areas both from the point of view of operating the ambulance service in that area, of accompanying patients being transferred out of the area to a tertiary centre and of generally being available in the emergency department of a small hospital. This is a life-time career.

Location of Ambulance

Ambulances should be based on a hospital whenever possible to allow a close working relationship to exist between the service and the hospital. To allow for training also of ambulance personnel as an on-going project. Ambulance attendants under no circumstances, should be hospital employees but rather employees of the Provincial Ambulance Service.

Where the hospital location does not provide a desirable distribution of ambulance vehicles detachments will have to be established at locations throughout areas. In this connection, Dr. Swoveland and Associates from U.B.C. are running a computer model to decide where to base ambulances in the Greater Vancouver Regional Hospital District and are prepared to do the same for the Greater Victoria Regional Hospital District.

Based on the Ontario experience, ambulance requirements for regions are as follows:

Urban Centres. Population one-half million to two million, one ambulance per 50,000. 200,000 to half million, one ambulance per 30,000. 50,000 to 200,000, one ambulance per 25,000 individuals.

Rural Areas. One ambulance per 10,000 population depending upon local factors.

The ratio of calls per population is in the nature of one call per day for each 10,000 population.

Responsibility of Operation for Ambulance Services

Ambulance services should be operated by individuals employed for that purpose. We would expect individuals employed by the ambulance service to transfer from their previous employment to the Provincial Ambulance Service. This would at once allow the new service to step across municipal boundaries assuming that the services are to be organized on a regional basis.

Responsibility for Provision of Service

Although firefighters are providing service in many parts of the United States of America we do not recommend that they be involved in this service in this Province. Our reasons are as follows:

1. To achieve promotion within a fire service it is necessary to leave the ambulance service and return to firefighting.
2. The prime responsibility of a firefighter is to the fire department.
3. The Fire Marshalls of Canada have resolved that "the Association of Canadian Fire Marshalls and Fire Commissioners unanimously agreed that ambulance services should be an integral element of the health care services and as such should be under the control of the Provincial and Territorial authority responsible for hospital programmes".
4. The Ontario Medical Association report "side line services can never obtain the professional efficiency demanded by the number and seriousness of traffic injuries seen today. It is manifest that the present lassez-faire policy in this

matter must be supplemented by a forthright effort to encourage the development of a full time service with well trained personnel."

5. Fire departments on the whole, are usually interested only in true emergencies.

6. Some of the reasons given in a panel discussion by firefighters in favour of them operating an emergency care service include the fact that it would automatically provide an improved level of emergency care to firefighters, it would upgrade the firefighter's public image which would in turn benefit his bargaining position, and it would broaden his professional skills and increase promotion opportunities. These may be legitimate comments but they are not justification for operating ambulance services from the public's point of view.

   What is needed is co-operation between fire department, police and ambulance service and the ambulance should be dispatched at the same time as the fire department equipment or as the police answer a call. As previously mentioned police and firemen should have had a degree of training sufficient to allow them to carry out life suffort until the ambulance crew arrive.

Financial Support of Ambulance Services

Ontario charges $5.00 basic fee plus $0.15 per loaded mile beyond 25 miles.

The cost of the Ontario ambulance service is $3.00 per head per annum.

The cost of an ambulance call in the City of Vancouver this year is $53.00.

The cost of the "emergency only" service operated by the City of Montreal is $100 per call.

Conditions of Service

The following conditions are suggested for consideration:

1. That the service will respond to any and all requests for ambulance service or transportation without reservation or qualification, excepting only when unable by reason of the service units and personnel being totally employed in response to ambulance calls at the time.
2. No direct charge or fee will be made to or required from, or accepted from, those carried.
3. That, except for charitable donations or gifts (which may be accepted under some circumstances), the sole source of funding for the service will be that derived from disbursements of the Provincial Government to the service.
4. That funds generated for the service, in this or any other manner, will be administered, disbursed and accounted for by a separate accounting and that no consolidation of ambulance service funds or expenditures will be permitted to occur.

5. That all records and accounts, or other data or information that may be requested by the Provincial Government, will be maintained and supplied as required and in the manner stipulated.

6. That the service will be operationally and functionally administered in the manner stipulated by the Provincial Government.

7. That only equipment or other items that have been stipulated by or approved for use by the Provincial Government will be used in the service.

8. That only personnel qualified in the manner stipulated by the Provincial Government, and certified where required by the Provincial Government, will be employed in the service.

9. That personnel will be employed and paid in the manner or on the basis stipulated by the Provincial Government.

We are opposed to any crews operating on a voluntary basis because they can not be "fired" and it is difficult to require a specific level of performance.

Certain volumes of business should justify certain staffing patterns, i.e., a community of 10,000 individuals could expect approximately 350 calls per year. This would justify one full time attendant for the ambulance service if he was only providing ambulance service. However, if our concept is accepted of this well trained paramedic working in the emergency department as well as running the ambulance service, he could be employed full time in a much smaller community with obvious advantage to the health services

in the region.

The full report provides examples of various levels of service to be provided.

Costs of Training

Industrial First Aid Certification	$ 50,288.00
Ambulance Techniques - two week course	227,132.00
Six week upgrading course	431,474.00
Gross Cost	$ 708,894.00

On the basis of preliminary discussions held with representatives of Manpower, it seems probable that Manpower participation would be forthcoming and in amounts of not less than 50 per cent.

Less 50 per cent Manpower sharing	354,447.00
ESTIMATED NET COST	$ 354,447.00

384 Students per year

Basic Ambulance Design and Equipment

Standards are laid down for the design of the ambulance and for basic equipment. Identification of the ambulance is by colour, the design of which is aimed at being adaptable to all types of vehicles with which we may be involved. It also is aimed to provide easy identification from the air and both from behind and in front of the vehicle. The siren is also to be distinctive and the personnel are to wear uniforms.

The equipment recommended as basic for use throughout the Province will cost $3,223.39 as of July 1973 per unit.

Optional special equipment has been described for special circumstances.

Transport of High Risk New Born Infants

It is recommended by Dr. Segal that rather than have various transport incubators dotted around the Province, the equipment should go out from the two centres designated as being competent to receive these infants, i.e., Royal Jubilee Hospital and Vancouver General Hospital. Transport should be only raised after discussion with a neonatologist at one of these centres.

Air Ambulance Services

We recommend an attempt be made to induce the Federal Government to upgrade its services from Comox Air Force Base. However, it must be realized that this will not take care of the far ends of the Province in areas where the Air Force can not reach easily or rapidly. For this reason consideration should be given to employing local helicopters to transport the patient to a strip from which fixed-winged aircraft can operate. At this point, we recommend that the Canadian Forces should take over. We do not recommend the development of a Provincially operated air service as we consider it would be impossible to operate this on anything like a satisfactory financial basis unless the aircraft had other duties. In this respect, it is not practical to keep aircraft flying around the Province with the kits described in our main report.

Thus to make it quite clear, we recommend that the Armed Services transfer patients from landing strips in pressurized

fixed-wing aircraft (not presently available) after the patient has been delivered to the strip by a local service. This will involve negotiations with local helicopter services concerning payment and equipment.

Certain specific injuries require immediate transportation to the Vancouver Area. A classic example is spinal cord injury where recent improvements in treatment and transportation have demonstrated in Scotland that no patient was seen who had been picked up and transported to the spinal cord injury centre shortly after an accident who remained completely paralyzed.

Some Legal Aspects of the Provision of Medical Care by Paramedical Personnel

At the present time, those physicians involved in the training of men from the Saanich Fire Department and the Metropolitan Ambulance Service for paramedical duties carry out this important work at the risk of being involved in a lawsuit because of obsolete legislation. The Medical Act of the Province, for this reason requires immediate amendment. If this is not done, our whole concept of training paramedics is at stake. The main report provides examples of two types of legislation from California and Washington State.

Communications System

A 911 reporting system should be developed for all areas of the Province. It is presently being discussed in Vancouver for the Vancouver Area.

British Columbia Tel are prepared to spend $1,200,000. converting their switching equipment but the cost of installing the new equipment and operating it would fall upon the local authority.

It would take two years to complete the installation of a 911 system.

In the Victoria area alone, 46 emergency numbers are listed in the inside cover of the phone book. We recommend the development of emergency operation centres immediately for Victoria and Vancouver with consideration of developing this concept throughout the Province. On calling 911, a caller would be connected with the emergency operation centre operator who would inquire "What service do you require?" and would immediately connect the caller with the dispatcher for that service. At the same time, the dispatcher would stay on the line, would monitor the call and would under certain circumstances relay the call to a second service, i.e., for fire department calls the ambulance would also be dispatched.

Clearly this system would work best if municipalities amalgamated from this point of view to serve a region, and the emergency services were able to cross municipal boundaries.

We have asked the British Columbia Tel to develop a visual identification system so that when panic stricken caller dials 911 and hangs up too soon, their number is recorded automatically.

Other Communication Systems

Although we can not provide the same standard of medical care in the outposts of the Province, as are available to people living in the cities, we can at least place these individuals in contact with medical advice. We can do this either by radio or by providing a Zenith number.

We visualize that an emergency medical assistant (paramedic) should be able to consult with expert medical advice. This consultation would be with the emergency physician on duty in the Regional or Tertiary Centre. In certain instances, such as neonatal care, it would be directly with Vancouver or Victoria. In the case of spinal injuries, it would be directly with the spinal cord centre.

Telemetry

We aim to develop and recommend relatively inexpensive equipment applicable for use throughout the Province so that a patient could be monitored in the course of a long journey of transfer between hospitals.

Assignment of Frequencies

It is absolutely mandatory and very urgent that immediate application be made for assignment of VHF and UHF frequencies for medical use in this Province . This will take time as the Federal Department of Communications moves slowly. Already interruption with the Jubilee's telemetry service has occurred by virtue of

the Canadian Federal Government allowing the U.S. Federal Government to give the same frequency to an asphalt paving company in Seattle.

Roadside Emergency Telephones

We feel that highways throughout the Province should be covered by a network at every five miles of emergency telephones capable of calling either to the local emergency operation centre where one is available, or to the local police. It is necessary to design a completely new piece of equipment as solid as a fire hydrant to prevent its destruction by vandals.

Commentary

Dr. Peter Ransford's full report for the H.S.P.P. contains a great deal of very useful detail and appendices. This should serve as a text book and guide for the future development of Emergency Services in the Province of British Columbia.

The highlights of this report only have been presented in this chapter.

Dr. Ransford advocates licensure of hospital emergency departments. The opinion of the H.S.P.P. is that there is no real need for specific licensure of hospitals. It would seem that the authority to control the proliferation of services exists in the power of the Health Ministry and the regional districts over the budget of the hospital. Those facilities

that are not approved by the authorities who must abide by an over-all plan should not be funded.

Dr. Ransford points out there is some debate and concern about hospital categorization. Past experience indicates that categorization should be carried out by some outside authority rather than by the hospital itself. The internal forces of the hospital are such that to dispense with a facility such as the emergency department is very difficult. However, if certain emergency departments are closed as a result of very careful planning and the hospital and its medical staff are presented with the basis for the decision then debate will probably be minimal.

Dr. Ransford refers to the benefits of regionalization. This report in a previous section has dealt with both regionalization and has referred to the establishment of an emergency-trauma programme in the University teaching complex in Vancouver. We have also suggested this "programme approach" be applied to Victoria and elsewhere, such as in New Westminster. There would appear to be little doubt that for certain parts of the Province evacuation of seriously injured and ill patients to both Edmonton and Calgary is a pattern dictated by the geographical location and transportation routes of specific parts of the Province, particularly the Peace River area and the Kootenays. Our first obligation is to the patient; so that there should be no barriers to such transfer of serious cases.

The report on emergency services also refers to giving "departmental status" to the emergency service at the hospital. The report is referring to the medical staff organization and the representation of the critical

services on the medical advisory board (synonum medical executive committee). It would appear to be very logical for the emergency service (which in some hospitals may include the trauma unit, intensive care unit) to be represented on the medical executive committee as it is a key service. The support of a multidisciplinary (including nursing) committee is also indispensable with regard to improving communications and assisting in the decision making process by providing all points of view.

In hospitals that may adopt some form of planned programme budgetting, the linking of emergency services with trauma units, intensive care units, etc. is quite rational provided that there are such linkages as common or rotating nursing staff, policies, etc.

There are a great many recommendations in the detailed report. The H.S.P.P. presented in its Report (Volume one, Part IV Section C, Chapter 3 only those that are considered to be of a major category.