

proven successful.

Conclusion: In cases of emergencies and disasters, the routine neurosurgical practice must be altered to cope with the situation and accommodate as many patients as possible.

Keywords: disasters; head injuries; multiple casualty incidents; neck injuries; neurosurgical triage; neurosurgery; triage

G-36

Developing an Earthquake Strategic Plan for British Columbia

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Western Canada, like most countries on the "Ring of Fire", is at great risk to earthquakes. The destructive power and consequences are so great that many countries feel unable to address prevention activities. Countries, their provinces (states), and their communities must examine how to minimize the effects of such catastrophic events. Emergency planners recognize that effective prevention activities require community involvement with support from provincial and federal governments. There are many professions, agencies, and industries that are interested in becoming partners and contributors to plans and solutions. The Province of British Columbia (BC) has developed a significant capacity to respond to major events such as forest fires and seasonal flooding. However, a strategic plan for earthquake preparedness that would span a 10–15 year period has been lacking, and therefore, only ad hoc activities have been accomplished.

In the fall of 1998, the BC Government undertook the development of a framework for a Provincial Earthquake Preparedness Strategic Plan using a process developed by the UBC Disaster Preparedness Resources Centre. Sixty-five leaders of key interest groups spent two days putting together a framework document. The document identified the five goals listed below. Each goal had several "objectives" that would contribute to accomplishing the goal. In turn, each objective was supported by specific "activities" that would result in the accomplishment of the objective.

Strategic Goal * Objectives * Activities

Strategic Goals:

- Increase British Columbian's personal, family and community preparedness for an earthquake;
- Improve emergency response and recovery;
- Improve the seismic safety of public and private building and infrastructure;
- Improve essential geoscience information; and
- Assess earthquake risk and vulnerabilities.

Five multidisciplinary teams contributed to the project, each assigned to a goal. These teams developed the objectives and the activities. They also identified the lead agency, time required to do the activity, and the approximate cost to accomplish the activity.

In this presentation, the author will outline the unique symposium format used with multidisciplinary

groups, and will give examples of the objectives and activities developed by the teams.

Keywords: British Columbia; Canada; earthquakes; goals; objectives; plans; preparedness; prevention; safety

G-37

Community-Based Disaster Medical and Health Support to Formal Emergency Medical Services

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When incidents occur that produce casualties and damage to communities, the response to controlling the outcome always is in the hands of the community leaders and its people. It is the community overall that ultimately pays the price for such events.

Community emergency services such as Police, Fire, Ambulance, and Rescue Services, are structured within the community to deal with the day-to-day activities and requirements to preserve the way of life of its citizens and properties. Preplanning to support these emergency services when required in times of major emergency, is the sensible way of being able to afford the best outcome for response to incidents that overwhelm local resources. This is true particularly for medical and health response to emergencies.

This paper outlines the actions that a community can take to provide responders trained in Disaster Medicine, who can assist the formal Emergency Medical Services in communities, and so assist in providing overall medical control and mass casualty management.

Keywords: communities; disaster; Disaster Medicine; emergency medical services; health support; mass casualties; medical control; medical support; preplanning; response

Panel Discussion I

Coordinating Efforts Against Anti-Personnel Landmines

Monday, 10 May, 15:10–17:20 hours

Chair: *Ronald D. Stewart, Katubiko Sugimoto*

PN1-1

Mine Victims Assistance: Prehospital Care Training

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Introduction: Landmines still are one of the most fearsome weapons that continue to kill many innocent victims several years after they have been implemented and accidentally are set-off by their victims: Most of the victims are poor peasants, innocent children, and women unaware about war. Unfortunately, they have to undergo all the social and economic consequences related to landmines such as death, loss of limbs, and/or other disabilities. Otherwise, members of the community cannot access their fertilised lands and produce their food

because infested by landmines. This results in a vicious circle of poverty.

Much effort is being done in demining areas, increasing awareness, banning further use of landmines, etc. Despite these efforts, landmines still are being scattered in areas of conflict and will be killing innocent victims for many years.

Why prehospital care?

Mine victims, as well as all trauma victims, start to die at the site where they are injured. Many of the victims will die before reaching health care services because of: 1) the distance between the site where the injury occurred and the health care institution; 2) the lack of available rapid communication and/or transportation; 3) the lack of qualified first-aid responders; 4) the lack of adequate health-care infrastructure (destroyed by the war or not existing). Once such victims do arrive at the health-care setting, adequate life-saving measures not always are provided because of lack of qualified staff. Therefore, technical assistance to improve prehospital care training in affected areas is needed.

Who must be trained?

Villagers usually are the first to contact the mine victim and should be able to provide basic first aid in order to keep the victim alive until advanced care is available. The challenge factor is time!

Trainees should be selected according to their various experience and current occupation. Preferably, they should be working actively in the health services at village or district level in areas with mine problems. Medical personnel from a local or a referral hospital (doctors, nurses) with extensive clinical experience with the treatment of mine victims also should be selected to participate in this training.

Place of training

Preferably, the training should be conducted at a location close to minefields and district hospital facilities that regularly provide first aid and surgical treatment to mine victims. Local district clinics or district hospitals are ideal training sites.

The training program

Three phases are required at country level:

- 1) *Training of trainers*—Trainers in collaboration with their respective health departments should be involved in organising training programs at district levels, and should work on the integration of training programmes into the national health policy. Financial and technical expertise assistance will be required in the implementation phase;
- 2) *Training at district level*—Trainers in collaboration with their MoH, will train medics at the district level to improve their capacity for assisting landmine victims with emphasis on the time that is the critical factor in lifesaving of all trauma victims;
- 3) *Training at village level*—Medics trained should be in charge of mine victims in different areas affected by landmines. At the same time, they will train villagers as first aid responders. This training should be as simple as possible, but efficient enough to maintain the victim's life until s/he has access to advanced care.

This presupposes that a survival chain is built in addition to the training; and

- 4) *Training seminars at hospitals*—Seminars are needed in hospitals dealing with the management of landmine victims with a view to improving knowledge and inform medical personnel on new technologies for the approach to trauma surgery. Collaboration with agencies experienced in trauma management (ICRC, EMERGENCY, and TCF) will be important.

Lifesaving kits

Life-saving materials to enhance the local equipment and the capacity to provide care are required. Most of District Hospitals are in need of basic surgical kits and fundamental supplies to perform the necessary primary surgery. Otherwise, trained medics need materials to be able to provide first aid to trauma victims.

Follow-up and evaluation

A regular evaluation and follow-up should be done in a view of improving the program and making modifications where needed according to local realities.

In addition to the above activities, training guidelines on prehospital care must be initiated. Scientific meeting, workshops, and seminars for a better understanding of the assistance required by mine victims are being envisaged.

NB: The lecture will be illustrated by slides on prehospital care training from Afghanistan, Angola, Burma, Cambodia, and North Iraq where the programmes have been implemented during the last five years by the Trauma Care Foundation (TCF) of Norway.

Keywords: equipment; evaluation; first-aid; landmines; lay public; life support; prehospital; supplies; surgery; training; trauma

PN1-2

Medical Support for Humanitarian Landmine Clearance

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The continuing incidence of injuries from anti-personnel landmines in many countries around the world has been publicised widely. Several organisations currently are involved with active landmine clearance operations by training local people in affected countries to clear mines. These hazardous operations are carried out in countries recovering from war, where the local infrastructure has been severely disrupted. The terrain and weather often are inhospitable. Active fighting still may be in progress. Supply and evacuation chains are uncertain and local medical support may be poor.

Planning medical support for these operations requires careful consideration of these factors, appropriate training of indigenous paramedics, and detailed assessment of the available local hospitals for definitive care for victims with landmine injuries. This paper examines the key issues involved, the potential pitfalls and offers practical advice on how to approach the problems.