

Educational and Training Systems in Sweden for Prehospital Response to Acts of Terrorism

Per E.J. Kulling, MD;¹ Jonas E.A. Holst, MD²

-
1. Director, Emergency Preparedness Unit, National Board of Health and Welfare, Stockholm, Sweden
 2. Consultant Physician, Emergency Preparedness Unit, National Board of Health and Welfare, Stockholm, Sweden

Correspondence:

Per EJ Kulling, MD
Emergency Preparedness Unit
National Board of Health and Welfare
S-106 30 Stockholm, Sweden
E-mail: per.kulling@sos.se

Keywords: biological; chemical; County Councils; education; funding; nuclear; preparedness; radiological; Regional Councils; Sweden; terrorism; training; weapons

Abbreviations:

CBNR = chemical, biological, nuclear/radiological

Web publication: 15 March 2004

Abstract

Sweden has a long tradition in planning for disaster situations in which the National Board of Health and Welfare has a key responsibility within the health sector. One important part of this disaster preparedness is education and training. Since 11 September 2001, much focus has been placed on the acts of terrorism with special reference to the effects of the use of chemical, biological, or nuclear/radiological (CBNR) agents. In the health sector, the preparedness for such situations is much the same as for other catastrophic events. The National Board of Health and Welfare of Sweden is a national authority under the government, and one of its responsibilities is planning and the provision of supplies for health and medical services, environmental health, and social services in case of war or crises. "Joint Central Disaster Committees" in each County Council/Region in the country are responsible for overseeing major incident planning for their respective counties/regions. The "Disaster Committee" is responsible for ensuring that: (1) plans are established and revised; (2) all personnel involved in planning receive adequate information and training; (3) equipment and supplies are available; and (4) maintenance arrangements are in place.

Sweden adopts a "Total Defense" strategy, which means that it places a high value in preparing for peacetime and wartime major incidents. The Swedish Emergency Management Agency coordinates the civilian Total Defense strategy, and provides funding to the relevant responsible authority to this end. The National Board of Health and Welfare takes responsibility in this process. In this area, the main activities of the National Board of Health and Welfare are: (1) the establishment of national guidelines and supervision of standards in emergency and disaster medicine, social welfare, public health, and prevention of infectious diseases; (2) the introduction of new principles, standards, and equipment; (3) the conducting education and training programmes; and (4) the provision of financial support. The budget for National Board of Health and Welfare in this area is approximately 160 million SEK (US\$18 million). The National Board of Health and Welfare also provides funding to the County Councils/Regions for the training of healthcare professionals in disaster medicine and crises management by arranging (and financing) courses primarily for teachers and by providing financial support to the County Councils/Regions for providing their own educational and training programmes. The National Board of Health and Welfare provides funding of approximately 20 million SEK (US\$2.4 million) to the County Councils/Regions for this training of healthcare professionals in disaster medicine and crises.

Kulling P; Holst J: Educational and training systems in Sweden for prehospital response to acts of terrorism. *Prehosp Disast Med* 1997;18(3):184-188.

Introduction

Sweden has a long tradition in planning for disaster situations in which the National Board of Health and Welfare has a key responsibility within the health sector. One important part of this disaster preparedness is education and training. Since 11 September 2001, much focus has been put on the potential acts of terrorism with special reference to the effects of the use of chemical, biological, nuclear/radiological (CBNR) threats. In the health sector the preparedness for such situations is much the same as for other catastrophic events. Since the early 1990s, the disaster educational programs for health professionals also include the special features of CBNR releases, and, during the last few years, these programmes have been extended and improved. Before describing these educational and training programs, some background information is provided relative to the Swedish healthcare system and the total defense strategy.

Health Care in Sweden

Sweden has a population of just less than 9 million people and geographical area of approximately 450,000 km² (274,500 mi²). Sweden is subdivided into 21 regions (18 County Councils and three Regions) with a total of 68 general hospitals with emergency-care facilities. These regions have the responsibility for medical and health care. The National Board of Health and Welfare is a national authority within the government. The most important tasks of the National Board are the supervision of medical care and social services as to quality, safety, and the rights of the individual, evaluation and follow-up studies of social policy, mediation of expertise, coordination of social services statistics, and epidemiological surveillance. The National Board also is responsible for gathering, collecting, and analysis of the official statistics on social services, public health, healthcare and medical services, and the causes of death. The National Board of Health and Welfare issues codes for statutes on the application of specific acts of law. Furthermore, the Board is responsible for planning and for the provision of supplies for health and medical services, environmental health, and social services in case of war or crises.

Local/Regional Planning

"Joint Central Disaster Committees" for each County Council/Region are responsible for overseeing major incident planning for their respective counties/regions. Each committee is supported centrally by the Emergency Preparedness Unit of the National Board of Health and Welfare, which provides equipment, training, and technology as needed. The County Council/Region must ensure that all healthcare and emergency services within the county/region are adequately prepared for major incidents (including war). "Disaster Committees" exist within hospitals and primary care organizations to ensure that effective planning is carried out at the local level. Hospital staff, representatives from local primary care organizations, emergency services, and other local organizations sit on these Committees. The "Disaster Committee" is responsible for ensuring that: (1) plans are established and revised; (2) all personnel involved in planning receive adequate information and training; (3) equipment and supplies are available; and

(4) maintenance arrangements are in place. A developed support network exists that includes the Emergency Preparedness Unit of the National Board of Health and Welfare and the County Councils/Regions.

National Planning

Sweden adopts a "Total Defense" strategy, which means that it places a high value on preparing for peacetime and wartime major incidents. The Swedish Total Defense system consists of military activity (military defense) and civilian activity (civilian defense). Defense is to be carried out using all of the means, both military and civilian, that international humanitarian law allows. Armed aggression constitutes the most serious threat to the national security.

The Swedish Emergency Management Agency coordinates the civilian Total Defense strategy and provides funding to the relevant responsible authority to this end. The National Board of Health and Welfare takes responsibility in this process. In this area, the main activities of the National Board of Health and Welfare are: (1) the establishment of national guidelines and supervision of standards in emergency and disaster medicine; (2) social welfare; (3) public health and prevention of infectious diseases; (4) introduction of new principles, standards and equipment; and (5) provision of financial support. The budget for National Board of Health and Welfare for this area is approximately 160 million SEK (US\$18 million).

To standardise national planning and preparedness for emergency situations, the National Board has published or is preparing guidelines such as: (1) "Medical Preparedness for Disasters"; (2) "Psychological and Social Management of Mass-Casualty Situations"; (3) "Nuclear Accidents and Disasters due to Release of Radioactive Materials"; (4) "Chemical Accidents and Disasters"; (5) "Pandemics"; (6) "Social Welfare Preparedness for Emergencies"; and (7) "Environmental Health Preparedness for Emergencies".

Within the national Total Defense concept, areas of priority include threats to CBNR agents and international activities. During recent years, special programs have been developed, including identification, contracting, and financial support of national experts and institutions (e.g., in nuclear medicine, microbiological preparedness, disaster toxicology, disaster psychiatry, and aspects of disaster medicine such as needs assessment in case of international support in disaster situations), to guarantee knowledge, research, education, and training within these fields. Support for a laboratory equipped for dealing with highly infectious agents (Biosafety Level 4) is included in the Biological Program as well as a rapid response team for suspected microbiological emergencies. The development of decontamination facilities for accident sites and hospitals, and personal protective clothing are areas of interest included in the Chemical Program.

The National Board also has a program for storing medical equipment and drugs for major incidents (including war) a computerized system for prehospital command and control, and a program for acute-care hospital functional reliability (reserve power, water supply, heating), which includes financial support to the County Councils/Regions.

The National Board of Health and Welfare also provides funding to the County Councils/Regions for training of healthcare professionals in disaster medicine and crises management by arranging (and financing) courses primarily for teachers and providing financial support to the County Councils/Regions providing their own educational and training programs.

National Board of Health and Welfare Educational Program

Central Courses

The National Board of Health and Welfare arranges courses in the field of disaster and crisis management within the health sector. These courses are financed fully by the Board, but the courses are conducted by special teaching centres in the county councils and regions. These courses primarily address teachers (doctors, nurses) in disaster/crisis management. The length of the courses varies, and the courses are provided once or twice a year. The program includes all of the relevant aspects of the subject. The following courses are being provided during 2003: (1) Disaster Medicine; (2) Management of the Healthcare System in Disaster/Crisis; (3) Command and Control on Accident Site; (4) Chemical Accidents/Disasters; (5) Decontamination Methods; (6) Radiation Accidents/Disasters; (7) Microbiological Preparedness/Bioterrorism; (8) Psychiatric/psycho-social support; (9) Planning preparedness for C, B N R events. The budget for these courses is approximately 9 million SEK (US\$1 million) for the year 2003. More details of these courses are described in the Appendix.

Joint Courses with Other Agencies

In addition to these courses, the National Board of Health and Welfare is arranging courses for first responders in CBNR events in cooperation with the National Rescue Services Agency and the Swedish National Police Board. These courses are directed to teachers, who in their turn, will teach at the regional and local levels. The aim of the courses is to improve the security level and to classify the command and control of CBNR situations. A detailed manual has been produced for use in CBNR situation.

In addition, these three organizations also arrange a course in command, control, and management principles for CBNR experts in the respective organization. The aim of this course is to familiarize the experts with problems related to command and control and how to communicate so that the expert advice will be understood for command and control personnel.

Regional and Local Educational Programs

On the local and regional levels, educational and training programs are provided in the field of disaster and crisis management. The extent of these programs varies from region to region. Much of this education and especially training is done jointly with the rescue services and the police and, where appropriate, with other organizations and agencies, i.e., industry, communities.

The regional/local programs include courses varying from one-half of a day to several days to one week depending upon the target group. The program includes the following: (1) disaster medicine; (2) management of the healthcare system in disaster/crisis; (3) command and control at the site of the event; (4) chemical accidents/disasters; (5) decontamination methods; (6) personal protective clothing for events involving chemicals; (7) microbiological preparedness/bioterrorism; (8) psychiatric/psycho-social support; (9) crisis communication; and (10) special programs for Mortuary personnel and porters and for switchboard personnel and secretaries.

The National Board of Health and Welfare provides approximately 20 million SEK (US\$2.2 million) in funding to the County Councils/Regions for this training of healthcare professionals in disaster medicine and crises.

Summary

The Swedish National Board of Health and Welfare is responsible for planning and training for potential terrorist attacks. However, County/Regional Councils are responsible for operational and training issues at the local level. Trauma and educational courses are standardized across the country and utilize a train-the-trainer approach.

Course	Content	Length/No of courses per year
Disaster medicine	<p>Disaster risks in society Rescue (fire) service and health care in the society Management and organization of health care in crisis/disasters Disaster medicine equipment Health care on accident site in major events Psychiatric and psycho-social support Chemical accidents/disasters Practical exercises Pedagogy and methods of education Working group activities</p>	Two weeks/twice
Management of the health care in crisis and disasters	<p>Disaster risks in society and their consequences for the health care system Principles of health care management in crisis/disasters Rescue service and police organization, working methods and management in crisis and disasters Cooperation and coordination (method, etc.) Methods of staff work Communication methods and systems Information management</p>	One week/twice
Command and control on site	<p>Disaster risks in society and their consequences for the health care system Principles of health care management in crisis/disasters at accident site Rescue service and police organization, working methods and management in crisis and disasters Cooperation and coordination (methods, etc.) Principles of triage and sorting of victims Communication methods and systems Information management</p>	One week/twice
Psychiatric/psycho-social support	<p>Disaster psychiatric/psychological concepts The effect of the psychiatric trauma on individuals and groups Risk group evaluation Post-traumatic stress syndrome Ethical aspects Mass-media contacts and information management Management (command and control) and coordination</p>	One week/once
Chemical Accidents/disasters	<p>Organization and resources at chemical accidents Principles for work at accident site Decontamination of contaminated persons Symptoms and treatment of chemically exposed persons (including chemical warfare agents) Information sources and expert advice Decontamination equipment Personal protective equipment Information management Planning of education and training</p>	One week/once
Decontamination methods	<p>Organization and resources at chemical accidents Principles for work at accident site (including assignment of responsibilities and at hospital) Medical care in CBNR events Methods of decontamination and principles for decontamination Decontamination equipment Personal protective equipment Information management Planning of education and training</p>	Three days/once

Prehospital and Disaster Medicine © 2003 Kulling

Appendix 1—Central courses arranged by the National Board of Health and Welfare

Continued

Course	Content	Length/No of courses per year
Radiation accidents/disasters	Nuclear risks and threats Nuclear energy techniques Symptoms and treatment of radiation exposed victims Information sources, information techniques, expert advice Planning of education and training	One week/once
Microbiological preparedness/bioterrorism	Microbiological risks and their background Microbiological preparedness in society B-agents (bioterrorism and biological warfare agents) Symptoms and treatment Methods for production of B-agents and dissemination methods Management of suspected B-agents Psychiatric/psychological reactions Information management	Four days/twice
Planning for CBNR	The crisis management system in Sweden CBNR threats and their background CBNR preparedness of the society Psychiatric/psychological reactions Management of the health care in crisis/disasters and war Information Management	One week/once

Prehospital and Disaster Medicine © 2003 Kulling

Appendix 1—(Continued) Central courses arranged by the National Board of Health and Welfare