Rambam developed a program to overcome these obstacles. Regular hospital services were suspended and a high level of readiness mandated by the program was maintained for the duration of the war (two months). The intensity and length of the program produced various unanticipated problems such as:
1) maintaining the necessary level of alert;
2) staff fatigue from 12-hour shifts;
3) idle hours that reduced enthusiasm for continuation of the program; and
4) anxiety of staff with family members at home during SCUD missile attacks.

This presentation will discuss these problems, along with solutions, so that they may be dealt with better or be avoided in similar future situations.

92
Hospital Training Exercise for Mass Chemical Warfare Casualties

Robinson A, Shapira Y, Bar Y, Wiener M
Israel Defense Force
Israel

Introduction: The preparation of hospitals for absorption of chemical warfare casualties demands planning an exercise and training program for hospital personnel and auxiliary services.
Methods: A unique scheme was devised for triage, decontamination, therapeutic treatment, and life-saving procedures to prepare the hospital for such an event. The exercise is preceded with introductory lectures for the hospital staff on the clinical aspects and the therapeutic treatment of chemical warfare injuries.
Results: During the exercise, the hospital receives a multitude of simulated chemical warfare casualties of varying age and injury severity. These "casualties" pass through triage, decontamination, and appropriate therapeutic treatment. The medical and auxiliary staff who treat casualties before and during decontamination wear full protective gear. A specific kit consisting of equipment and antidotal drugs necessary for treatment of chemical warfare casualties is used. Medical and logistic controllers check the hospital management at various stages of the program.
Conclusions: It is believed that this scheme, repeated on a regular basis, can preserve optimal management of the hospital in the event of a chemical warfare attack.

93
Joint Activity on Health Aspects of Chemical Accidents

Haines JA, Stevens J,** Visser R,*** Younes M,+ Kulling P,++ Savelkoul J+++*
* IPCS, Geneva, Switzerland
** UNEP (IE/PAC), Paris, France
*** OECD, Paris, France
+ WHO (ECEH), Utrecht, The Netherlands
++ Swedish Poison Information Centre, Stockholm, Sweden
+++ Department of Intensive Care-Clinical Toxicology, University Hospital
Utrecht, The Netherlands

Four international organizations: 1) International Programme on Chemical Safety (IPCS) (ILO/UNEP/ILO); 2) World Health Organization-European Centre for Environmental Health (WHO-ECEH); 3) Organization for Economic Cooperation and Development (OECD); and 4) United Nations Environment Programme-Industry and Environment Programme Advisory Committee (UNEP-IE/PAC) have undertaken a joint project to prepare guidance on health aspects of chemical accidents. A general guidance document for policy-makers and a technical document for various professionals involved in planning and response to chemical accidents is being drafted.

The documents to be published and distributed worldwide are the result of drafting work by a group of experts in the field from all over the world, and the examination at an international workshop of some 70 experts, held in April 1993. These documents are concerned with various aspects of the health sector's responsibilities in preparedness for an response to chemical accidents, including provision of information, organization and planning, patient management, and education and training.

The guidance material on health aspects of chemical accidents will be used by the four organizations in their various programs dealing with chemical accidents. The technical document is intended to be used by health care professionals, and also addresses those at the operational level who are responsible for preparing and implementing chemical accident contingency plans. This document will be a valuable training tool for these various professionals.

94
The International Chemical Environment (ICE) Project

Jonckheere F
European Chemical Industry Council-ICE
Brussels, Belgium

Although the chemical industry has a fine record in transport safety, it is committed to continuous improvement. Under its Responsible Care Initiative, the statement is: "one incident is one too many." The International Chemical Environment (ICE) is a cooperative program between chemical companies to prevent chemical transport incidents and to respond effectively if and when they do occur.

The ICE was started in May 1990 by a small group of chemical companies which recognized the need for such coopera-

tion. Since November 1991, the program has become an official activity of the European Chemical Industry Council (CEFIC), involving the whole of the chemical industry in Europe. The ICE splits into two areas: 1) Prevention; and 2) Emergency Response.

Because each chemical company has a different mix of transport needs including—road, rail, sea, liquid, gas, the CEFIC Prevention Working Groups are funded and organized by interested companies. They produce Safety and Quality Rating Systems (SQRS) and apply them to the performance of distribution service providers such as trucking, shipping, and storage companies.

Emergency response, however, is required by all chemical companies. Therefore, it is funded through CEFIC and coordinated across national boundaries by Working Groups involving representatives from existing response schemes. Guidelines are developed so that schemes and centers can be set up easily where none currently exist.

The ICE aims to build upon the best existing prevention and emergency response practices and encourages their uniform application throughout Europe. It has gathered support progressively and now is in its implementation phase. This support has come not only from the chemical industry, but also from national and EC Authorities and distribution companies.

95
The Use of a Special Emergency Hospital in Cases of Chemical Accidents

Savelkoul TJF, ** Noordergraaf GJ,* ** Meulenbelt J,* ** van de Pompe C ****

* University Hospital Utrecht, Department of Intensive Care and Clinical Toxicology

** National Institute of Public Health and Environmental Protection, National Poison Control Center

*** Armed Forces Hospital Organization

The Netherlands

Exposure of a number of people to toxic chemicals will result in a need for hospital facilities to provide observation and treatment. The knowledge of medical toxicological problems in general hospitals often will not be sufficient to cope with these problems. Additional information supplied by poison information centers can provide the necessary expertise, possibly supplemented with medical assistance. It is of utmost importance that the correct sample strategy according to treatment protocols, be followed. Only then will it be possible to evaluate the accident correctly (especially the relation between exposure, body burden, and effects).

In the Netherlands, the combined efforts of the Ministry of Welfare, Health and Cultural Affairs, and the Ministry of Defense have made it possible to create facilities for the immediate admission of about 100 victims. On the ground floor of the University Hospital in Utrecht, an emergency hospital has been constructed in which the Department of Intensive Care and Clinical Toxicology, together with the National Poison Control Center, is situated as an operational unit with regular patient care. In the case of an emergency involving more casualties, this intensive care department can be enlarged from 10 to 40 beds. Apart from this, a medium care department with about 60 beds, can be made operational. This can be accomplished within the organization of the University Hospital and the Central Military Hospital. Further extension up to 400 beds is possible, but requires several days to set up. The emergency hospital has been used several times in cases of chemical accidents with a limited number of casualties.

The advantages of such a facility are: 1) all patients are evaluated by expert physicians of medical toxicology; 2) treatment is performed according to uniform protocols; 3) evaluation of the relation between exposure-body burden effects can be established; and 4) the facility is used as a training center for simulation exercises.

96
Overview of the Planning and the Prehospital Response of EMS in Israel During the 1991 Gulf War

Adler J

Magen David Adom

Israel

Magen David Adom (MDA), as the National Red Cross Organization in Israel, operates the prehospital medical services in emergencies. Until the 1991 Gulf War, MDA's task was to support the civil defense medical units in providing prehospital care and the evacuation of casualties to hospitals.

One of the lessons learned during the Gulf War was that MDA ambulance crews were the first responders on the scene and usually finished the evacuation of casualties before civil defense medical units appeared. A decision was made during the war, to reinforce MDA crews with civil defense medical units operating jointly. Additional lessons learned by the prehospital emergency services will be presented and discussed.

https://doi.org/10.1017/S1049023X00047828 Published online by Cambridge University Press