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First-aid preparedness in small workplaces with special reference to occupational health services

by ANIKA VAARANEN, R.N.,¹ TERTTU KOLIVUORI, R.N.,² KITTA ROSSI, R.N.,³ MATTI TOLONEN, M.D.,¹ and JUHANI HASSI, M.D.²

VAARANEN, A., KOLIVUORI, T., ROSSI, K., TOLONEN, M. and HASSI, J. First-aid preparedness in small workplaces with special reference to occupational health services. *Scand. j. work environ. & health* 5 (1979): suppl. 2, 12-15. First-aid preparedness was surveyed in 163 small firms employing 2,400 persons. Although 11 % of the employees had received first-aid training, half of the firms lacked first-aiders. Only one-fourth of the first-aid kits were equipped according to instructions. Checking and maintenance of the equipment, as well as information about first aid at the place of work, were generally inadequate. Instructions were commonly lacking for the safe use of chemical substances. Only 9 % of the firms fully complied with the requirements for optimum first-aid preparedness. Employers at small firms seem not to be sufficiently aware of their liabilities with regard to first aid. Yet, most of the faults and defects could be corrected by means of arrangements within the firms once the instructions were better known. During their visits to places of work occupational health personnel should inspect the first-aid preparedness and advise the employer on first-aid requirements. In addition the expertise of the insurance company, the local Red Cross or the regional institute of occupational health may be utilized.

Key words: first aid, occupational health nursing, occupational health services, small enterprises.

The Labor Safety Act of 1958 stipulates that first-aid preparedness is the responsibility of the employer. The Ministry of Social Affairs and Health published a detailed guide on the application of the clause in 1973 (1).

Every place of work should employ at least one person with first-aid training.

Workplaces with substantial safety hazards should have at least one first-aid-er for every 25 employees in every shift or first-aid help should be easily available. In offices and other firms with low risks one first-aid-er for every 50 employees suffices. Large companies should train 5 % of their personnel as first-aiders.

The employer must appoint an employee to be responsible for checking the first-aid equipment, its condition, and storage monthly to see that faulty equipment is repaired and that the inventory of supplies is complete. This person may be an occupational health nurse, a safety officer, or any other employee of the enterprise.

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Table 1. Items scored in the first-aid preparedness survey.

Item	Score
Number of personnel trained in first-aid	0—5
Presence of first-aiders on various shifts	0—5
Presence of personnel capable of resuscitation	0—4
Existence of a first-aid group	0—1
Organized first-aid group practices	0—1
Number of first-aid kits	0—5
Content of first-aid kits	0—5
Type of first-aid kits	0—5
Responsibility of caring for the first-aid kits	0—3
Frequency of first-aid kit checks	0—5
Accessibility of first-aid kits (locked or unlocked)	0—5
Presence of first-aid kits in the motor vehicles of the workplace	0—5
Availability of supplementary first-aid equipment in the workplace	0—2
Registration of personnel with first-aid training	0—5
Location of emergency number near telephone	0—5
Marking of first-aid kits throughout the workplace	0—3

The employer is also obliged to instruct his personnel with regard to accidents and job-related hazards to health and safety. Accordingly, the instructions for safe use and first aid in the handling of dangerous substances, as well as catastrophe preparedness, are considered a part of first-aid preparedness.

Signs showing the location of the following items must be visible at the workplace: lifesaving equipment, transporting and other first-aid equipment, telephones, taxi stands, and hospitals or health centers and nurses (addresses and phone numbers). In addition, in order to insure rapid first aid, easily visible placards should list the measures to be taken in case of accident or disease.

THE WALK-THROUGH SURVEY

The occupational health nurses checked for first-aid preparedness in all of the 163 firms visited (2). The data were partially collected with the questionnaire sent to the employers before the nurses' visit. Yet most of the information was gathered during the visits.

The following aspects of first aid were evaluated: (a) training of first-aiders, (b) kits, (c) equipment, and (d) information.

A score was used to assess first-aid pre-

Table 2. Interpretation of the total score given to a workplace for first-aid preparedness.

Total score	First-aid preparedness
0—11	Agreement with rules
12—21	Minor deviations
22—53	Intermediate deviations
54—62	Substantial deviations or lacking

paredness. It was formed from the points given to the 16 items listed in table 1. Every variable on the list was assessed and compared with the recommendation of the Ministry of Social Affairs and Health (1). The importance of each point determined the final evaluation given the workplace in question. The greater the number of points the greater the deficiencies. The interpretation of the total score is presented in table 2.

RESULTS

First-aid preparedness had been organized according to instructions in 14 places of work (9 %), and deficiencies were detected

Table 3. Distribution of the rating given for first-aid preparedness.

Total score	Firms		
	N	%	% a
0—11	14	9	10
12—21	40	24	22
22—53	108	66	67
54—62	1	1	1
Total	163	100	100

a Percentage calculated from the observations made for the different branches of economic activity and taking into consideration the proportion of workplaces surveyed.

in 148 establishments (table 3). It was totally lacking in one place of work (a restaurant employing 18 persons). Of the total number of personnel in all the workplaces, 11 % had been trained in first aid. Despite this fact, 91 establishments (56 %) had no trained personnel at all. Of the service establishments, 71 % of the workplaces had no first-aiders. The firms in the service branches most commonly (71 %) lacked first-aiders.

The content of the first-aid kits matched the instructions in 42 workplaces (26 %). In more than one-half of the workplaces in the service branch of economic activity the only thing in the first-aid kit was a package of band-aids.

Regular monthly maintenance of the kits was organized in 35 workplaces (21 %). Medicines were out of date or contrary to instructions in first-aid kits of 38 workplaces (23 %). No significant differences were found for the industrial and non-industrial workplaces.

With one exception, catastrophe preparedness was lacking in enterprises urgently needing it, e.g., a plant manufacturing pyrotechnical equipment.

In all the firms instructions for safe use and first aid for chemical substances were nonexistent. Information about the location of first-aid equipment was, in general, lacking. Emergency phone numbers were on hand in only some firms.

The occupational health nurses spent a total of 49 h, i.e., 18 min per firm, in the survey of first-aid preparedness.

DISCUSSION

First-aid preparedness was generally inadequate when considered with respect to the requirements. The defects were attributed to insufficient awareness of the duties and negligence on the part of the employers. In other words, personnel and employers needed to be informed about first-aid requirements. The information could be distributed through public mass media, in mass education meetings, and through businessmen's associations. Counseling could also be provided by the municipal health centers, insurance companies, and the Red Cross.

Most of the defects were not considered serious, and they were unlikely to endanger the health and safety of the personnel. The faults could be corrected relatively easily and inexpensively.

Ninety-one places of work (56 %) lacked first-aiders. The required training is arranged by certain insurance companies, the Red Cross, and first-aid instructors approved by the Red Cross. The insurance companies usually give courses for large companies, but they also collect trainees from small places of work. This training is free of charge. The occupational health nurse of a health center may organize and coordinate the first-aid training required for the small firms she serves.

Only in 20 % of the firms did the first-aid equipment and its supervision fulfill requirements. It would be appropriate to let a first-aid in the workplace take this responsibility. He or she could also see that the emergency phone numbers and other first-aid information are adequate.

Catastrophe preparedness was insufficient in places of work in which a disaster was possible. These plants need a qualified first-aid and rescue group with regular drills. This activity could hardly be arranged by the companies alone, but it could be planned in collaboration with the local health center and fire department.

Instructions for the use of dangerous substances were generally lacking. They often require expertise in occupational hygiene and toxicology. The occupational health personnel should detect the possible fault in the firms they serve and guide the employer to take the needed measures. The

required expertise is available at the regional institutes of occupational health.

The employer is responsible for the arrangement of first-aid preparedness at the workplace. Yet the expertise of health professionals is often needed. The Social Insurance Institute meets a certain part of the costs incurred for consultation with medical staff. The supervision of first-aid preparedness is the obligation of the labor inspectorate.

Occupational health personnel, preferably the occupational health nurses, should periodically participate in maintaining optimum first-aid preparedness in

the firms they serve and guide the employer to take the measures needed.

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