

HEALTHY FIREFIGHTERS

1. Case metadata

▪ **Country/ies of origin:**

Sweden

▪ **Year of publication by agency:**

N/A

▪ **Sector:**

PUBLIC ADMINISTRATION AND DEFENCE; COMPULSORY SOCIAL SECURITY (O)

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2. Organisations involved

Kommunalarbetarförbundet Skellefteå Räddningstjänst

Swedish Association of Local Authorities and Regions

BRF Brandmännens Riksförbund

With contribution from:

Swedish Civil Contingencies Agency MSB

Swedish Work Environment Authority

3. Description of the case

3.1. Introduction

Municipal rescue services in Sweden, among others, fire services, are regulated by law for protection against accidents. The municipalities are given a lot of latitude to determine themselves how these services will be organised. This can involve, for example, fire rescue and prevention, traffic accident response, diving rescue, forest fire response and response to chemical catastrophes.

Therefore, in addition to exposure to fire, explosive substances and risks of falling or being injured by falling materials, firefighters are exposed to chemical substances (e.g. carbon monoxide, carbon dioxide, sulphur dioxide, hydrogen cyanide, acrolein or other aldehydes) and biological agents (bacteria, viruses and toxins as fibre airborne particles) that could have negative health effects.

Firefighters are exposed to substances known to be hazardous, as well as to other substances for which knowledge about health effects is limited or non-existent. Risk for exposure can occur:

- from a fire or accident;
- during follow-up extinguishing;
- during decontamination;
- during treatment/reconditioning of contaminated material, clothing and equipment.

Also, a combination of several different hazardous substances can occur and the effects can be added or multiplied. There is relatively little knowledge about the effects of repeated exposure.

To successfully reduce exposure to chemical and biological hazards and improve safety of fire service activities, the Swedish Association of Firefighters — Brandmännens Riksförbund Facket för Sveriges Brandmän, together with the emergency service organisation — Kommunal Räddningstjänsten and the Swedish Association of Local Authorities and Regions — Sveriges Kommuner och Landsting started a project “Healthy Firefighters” (Friska Brandmän).

3.2. Aims

The purpose of the project was primarily to influence attitudes, routines and methods in order to create a better and healthier work environment for firefighters. The project focused on all tasks performed by firefighters of the Skellefteå fire brigade during the downtime between responding to alarms, including the cleaning, repair and maintenance of clothing and equipment, and during all educational activities.

3.3. What was done, and how?

A risk assessment, in which workers, union officials and Skellefteå management participated, was carried out to identify exposure situations. As a follow up, new routines and procedures were developed to avoid exposure situations and to minimise contact with contaminated materials. A special training was provided to teach firefighters how to follow new procedures.

According to the model which Kommunalarbetarförbundet Skellefteå Räddningstjänst implemented:

- Firefighters at the station have clean and appropriate clothing and equipment.
- Firefighters at the station have protective masks and filters available together with alarm clothing.
- All vehicles are kept clean and free from hazardous substances.
- All contaminated material after a rescue action is transported separately from personnel during the return to the station.
- All contaminated material after a rescue action is stored separately in an appropriate container until cleaning/repair.
- All washing of alarm clothing is done in a separate room in a washing machine designated for this purpose alone.



- All drying and retreatment of alarm clothing takes place in a separate room designed for this purpose.
- All decontamination of air fittings (smoke diving equipment) takes place in a separate area in a washing machine used only for this purpose.
- All fire hoses are stored in a water-filled, covered container while awaiting cleaning.
- All other contaminated material is sanitized in a separate, appropriate locale.

3.4. *What was achieved?*

- New routines and procedures were developed in order to avoid exposure situations and to minimise contact with contaminated material.
- Safer and healthier routines supported and used by all personnel contributed to a better work climate and more effective use of personnel and equipment.
- Personnel at the fire station have a more active and constructive role in identifying potential risks and developing countermeasures and a more positive attitude toward work-related health and safety issues.
- Interest in the use of the model of Kommunalarbetarförbundet Skellefteå Räddningstjänst has spread rapidly following the start of the project, Healthy Firefighters (Friska Brandmän), and the unique involvement of the unions representing firefighters (Kommunal and Brandmännens Riksförbund) and the Swedish employer organisation (Swedish Association of Local Authorities and Regions). The support and collaboration of employer and union organisations has contributed to the interest in and credibility of the educational materials. The Skellefteå model and accompanying materials have been presented at approximately 20 venues, and the model is being implemented at an increasing number of fire stations. Work with the project continues, and possibilities for how to best distribute and continue to develop the materials are currently discussed.

3.5. *Success factors*

The participation of workers, union officials and management in Skellefteå was essential in developing the model of risk assessment as well as countermeasures. The continual and repeated risk assessments led to the identification of several additional points of exposure to potentially harmful substances. This, in turn, led to more frequent, constructive input about measures to remove or reduce exposure.

The model is believed to be sustainable, since it is based on continuous risk assessments and promotes participative solutions to reduce risks.

The participatory approach has contributed to increased interest among those affected.

With the involvement of the two unions and the employer organisation, the interest of personnel, unions and management at other fire stations has increased.

3.6. *Further information*

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3.7. *Transferability*

The costs of the project have been minimal in terms of time spent and investments in equipment, etc., so the solution could also be easily adapted by other fire stations in other countries.

4. References, resources:

- <http://www.friskabrandmän.nu/>
- <http://www.brandmannensriksforbund.se/Om-Oss/ARKIV/FRISKA-BRANDMAN/>

CASE STUDIES



1. Contaminated clothing removed after alarm.



2. Contaminated shoes washed after alarm.

CASE STUDIES



3. Contaminated alarm clothing transported separate from personnel.



4. Alarm clothing washed in separate locale.

CASE STUDIES



5. Equipment cleaned in separate locale after alarm.

Photos: Claes-Håkan Carlsson