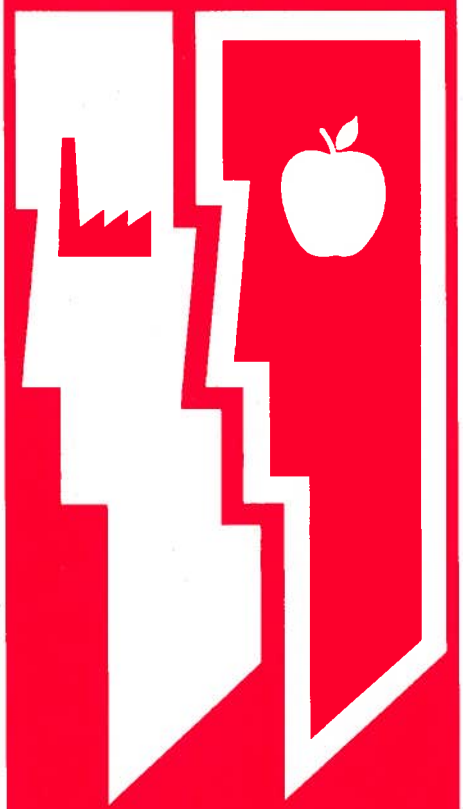

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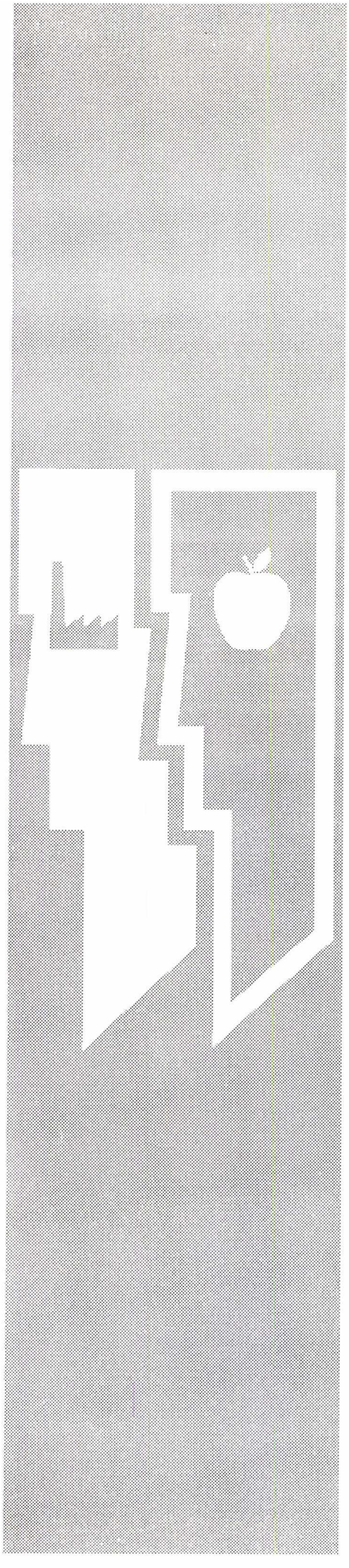
# WORKING CONDITIONS IN HOSPITALS IN THE EUROPEAN UNION



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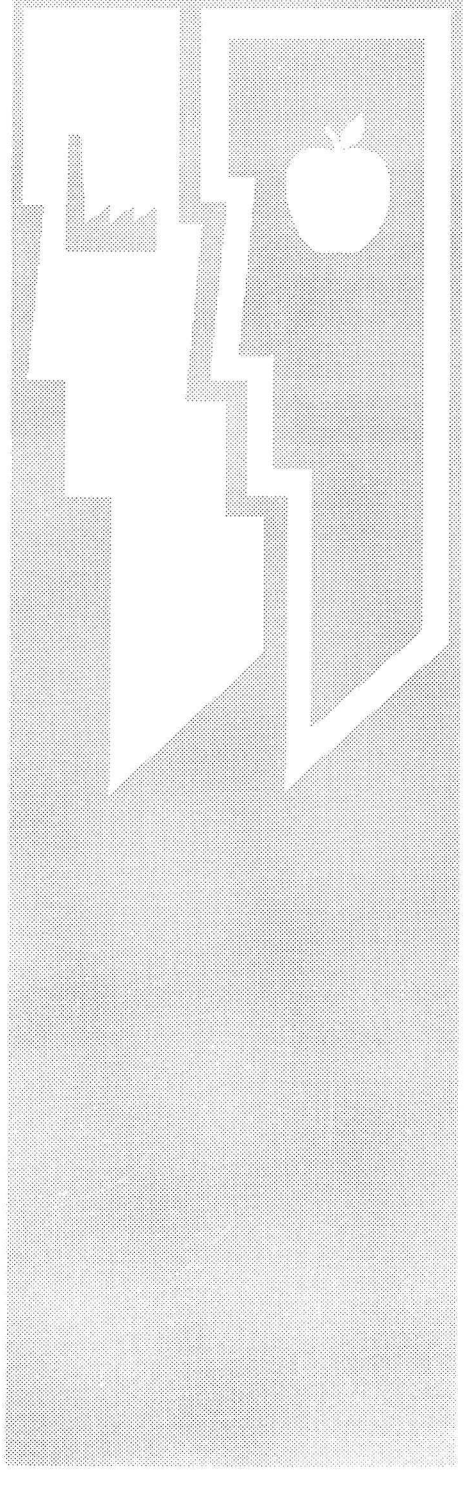

European Foundation
for the Improvement of
Living and Working Conditions

# WORKING CONDITIONS IN HOSPITALS IN THE EUROPEAN UNION

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## *Preface*

Monitoring working conditions - that is to say offering a better picture of working conditions - has been recognized as a very important issue in Europe and in particular in the European Union in the recent years.

A better understanding of what is actually taking place in the workplace, of the problems encountered, of the risks faced, of the populations facing these problems and these risks, of the changes taking place and their extent, is necessary for policy makers to set up priorities and action programmes, to identify gaps to legislation, to measure progress made.

Their increasing weight of the European dimension in the social field had to be matched with the development of monitoring instruments at the Community level, development which had, until recently, been lagging behind.

The European Foundation had been actively contributing to it since 1987 as the monitoring of working conditions became an important part of its work programme. Three levels of action were developed.

At macro level, the First European Survey on working conditions was realized in 1991, the first of its kind, with the aim to give every 5 years an overview of the work environment situation.

At the other end of the spectrum, a description of best practices and policies for the assessment of working conditions at company level was finalized in 1995. The 1989 European Framework Directive on occupational Health and Safety has given this issue a particular momentum by requiring a systematic evaluation of risk situations in all companies.

At branch level, two studies were realized: the present one on the Hospital Sector, and another one on the Meat Processing Industry, with a view of setting up a methodology to describe the working conditions at branch level. Both sectors were chosen after consultation with both sides of industry and with the Commission. A network of researchers from national occupational Health and Safety organizations in each EC Member State was set up.

The European branch level is an increasingly relevant level for the prevention of occupational risks and the improvement of working conditions. Problems are often quite similar, although health prevention policies and priorities, can be somewhat different from one country to the other. Action programmes and research are also carried out simultaneously in various countries and a lot is to be gained by knowing what is done and how things are done elsewhere. Synergies could be developed and possible duplications avoided.

One also has to keep in mind that European branch negotiation will probably increase in the near future, which could be usefully supported by such research as the present one.

Clive Purkiss
Director

Eric Verborgh
Deputy Director

## *Contents*

# *Summary*

## Introduction

This summary reflects the main results of one part of the study 'Monitoring the Work Environment at Sectorial level'. This part regards the Hospital Sector in Europe. In this study, which was a project of the European Foundation for the Improvement of Living and Working Conditions, ten Member States of the European Community (EC) were involved. The study report describes some social economic characteristics of the Hospital Sector, but it mainly presents a cross-national overview of the occupational health and safety situation in this sector. Since the report is particularly meant for policy makers, it also contains policy options for further improvements, both at hospital level, as well as at sectorial level and at national level. This summary points out the headlines in these topics.

## Context and aim of the study

The study was started by the Foundation in September 1993 to meet two current developments regarding working conditions in Europe. Firstly, the monitoring of working conditions is increasingly judged to be a main issue in policy making in the European Union, which requires development of monitoring instruments. Secondly, the European sectorial level is more and more being recognized as a right level for preventive actions in order to improve working conditions. In addition, several other developments at European level colour the background of this study, such as the progressing European legislation on health and safety at work.
To meet these trends, this study was set out to develop and test a standardized method of data gathering and reporting, which should result in a description of the occupational health and safety situation of a sector across Europe, useful for monitoring purposes and for policy making. Hence, the main objectives of the study were:

1. To identify risks, risk factors, and groups at risk within the sector.
2. To identify possible measures for further improvement of the working environment in the sector.

Two sectors were chosen for the experimenting with this new European sectorial approach: the Hospital Sector and the Meat Processing Industry. Both sectors are well represented in all EC Member States and have a considerable economic weight. For the experiment, it was also valuable that these branches are a service and an industrial sector, and that sufficient data were expected to be available. The study has resulted in two separate reports, on one sector each.

## Methodology of the study

To carry out the study, a network of researchers from national occupational health and safety organizations in ten EC Member States was set up. This network included Belgium, Denmark, France, Germany, Greece, Ireland, the Netherlands, Portugal, Spain and the United Kingdom.

This group firstly developed a so-called sector profile, which provided the uniform structure for the gathering and reporting of national data on the sector. After a brief pilot study, the researchers used this profile to make the description of the sector in their country.

The national data concerned social economic characteristics of the sector, health and safety output, the work environment, as well as actions, instruments and policies in this area. The data mostly already existed, and were collected from sources such as statistics, registers, surveys, literature

and regulations. Furthermore, they included both quantitative and qualitative data. Most data stemmed from 1989-1993, but occasionally they were older, or more recent. In addition, the researchers interviewed key informants from employers' organizations, unions, governmental bodies, and other organizations relevant to the sector. This was first of all done to obtain the parties' views and opinions on the health and safety situation in the sector. Other reasons were to get supplementary information, and to have the draft national report checked.

The next step in the study was the consolidation of the information from all ten national reports into one overall report. This consolidated report was composed by the Netherlands Institute for the Working Environment, NIA. To ensure the correct presentation and interpretation of the data in this consolidated report, a draft version was discussed in a meeting with all participants, before finalizing it.

Despite the obstacles encountered, both during the national reporting and during the consolidation, the method of this study has proved to be successful. Not only has it resulted in a synthetical picture of the occupational health and safety situation in the Hospital Sector, and an overview of policy options for further improvements. It has also pointed out the necessary adjustments in the sector profile and the procedure for data gathering, which will make future application of this method in other sectors a significant and efficient undertaking.

## Social economics characteristics of the Hospital Sector

Across the ten European countries involved in the study, the Hospital Sector is a quite important economic sector. The work force in the sector represent 2.9% to 5.5% of the national working populations. The total expenses in the sector varies from 1.9% to 10% of the Gross National Product.
The total number of institutions in the Hospital Sector varies between 98 in Ireland, and almost 5,200 in the United Kingdom. Most hospitals employ over 100 persons. In most countries the employment in the public sector is dominant.
The majority of the hospital workers is female, has an intermediate or low education, and is full-time employed. The sector's position on the labour market is fluctuating. Some countries are facing a shortage in nursing personnel while in other countries there is no demand for qualified personnel.
The overall economic situation is that the sector experiences economical constraints.
In the Hospital Sector a high degree of medical technology is found, but most of the work is labour intensive hand work: personal contact and cure, which can not easily be mechanized or automated. The work organization in hospitals is often characterized as a 'professional bureaucracy'. The work process is involved with using a great variety of materials, such as pharmaceutical and laboratory chemicals, disinfectants, nursing requisites, cleaning agents and food. Several equipment (medical surgical, laboratory, kitchen, laundry and sterilisation equipment) and tools are being used.

Five main trends are now current in the Hospital Sector, affecting the ten countries to various extent. These trends are: the steady increase of the expenses, while at the same time hospitals have to reduce their costs due to general economic constraints; the ongoing development in the use of high technology equipment for diagnose and treatment; an increase of the intensive care; the introduction of new management concepts, such as Total Quality Management; the implementation of EC-directives on occupational health and safety issues, of which six in particular are relevant to the Hospital Sector.

Throughout the ten countries, the Hospital Sector will to some extent be influenced by the

European integration, particularly by the specific regulations on occupational health and safety issues. Interviewed key informants from employers' organizations, unions, governmental bodies, and other organizations, mostly consider the European integration to have either positive or negative effects on the Hospital Sector. Some countries hope that the harmonization of legislation will improve the working conditions, while others (especially those countries with high standards regarding work hygiene, safety and health) fear that positive current standards are deteriorated by the EC.

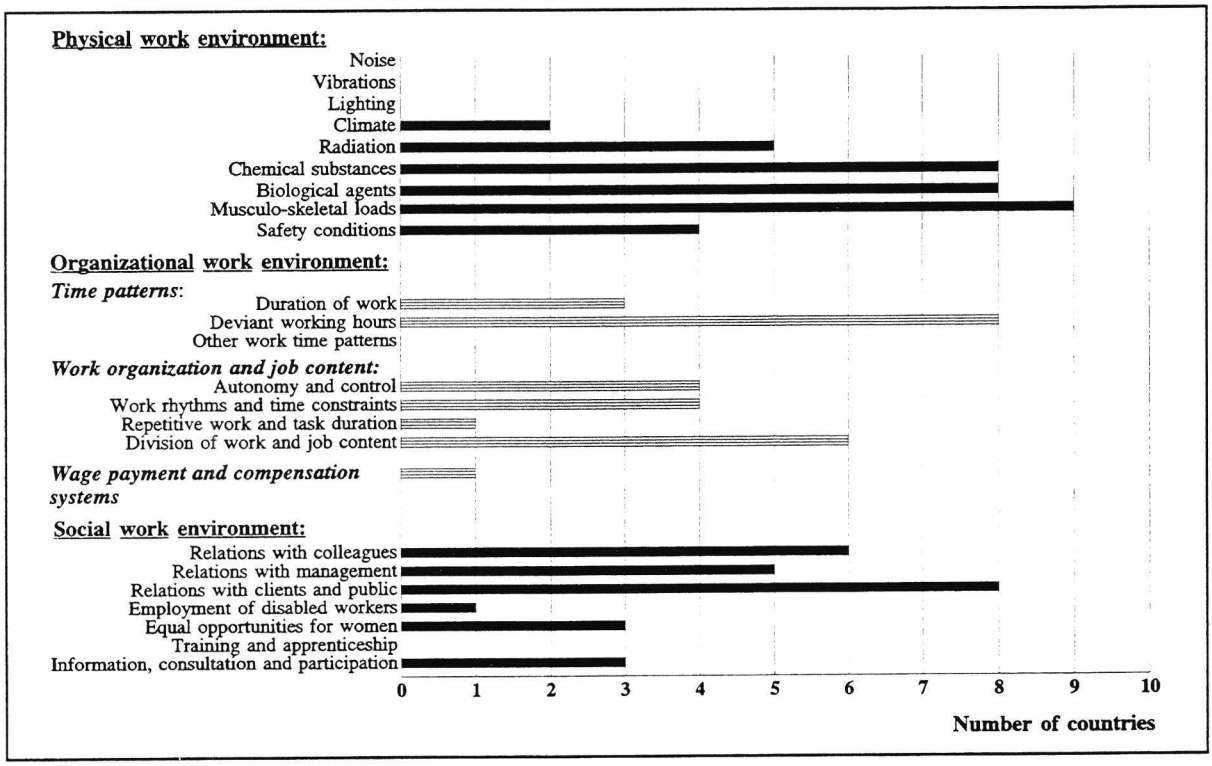
## Occupational health and safety in the Hospital Sector

With respect to the occupational health and safety situation in the Hospital Sector, the study has resulted in two main conclusions. First of all, it has become clear that the sector already has been active in improving working conditions. In all ten European countries involved in this study, various improvement activities have been undertaken, both in individual hospitals or institutions, as well as at sectorial level and at national level. The second conclusion is that, despite the improvement efforts, the Hospital Sector still faces several problem areas in occupational health and safety. To these problem areas, a fairly broad agreement exists among the ten countries. The main results on risk factors, related health problems, risk groups, and actions and policies undertaken to improve the work conditions, are presented hereafter.

### Main risk factors and related health problems

Literature information on risk factors in the Hospital Sector has resulted in the risk profile presented in Figure 1. It shows the number of countries in which the various risk factors were identified as a main problem by the researchers.

*Figure 1: Risk factors in the work environment of the Hospital Sector in ten European countries, identified as main problems by researchers on literature information*



In addition, key informants gave their opinions on the main health and safety issues in the sector, which resulted in a 'top 5' of issues. The combination of the literature information and the views of key informants has led to the conclusion that there is a general consensus on at least four risk factors: musculo-skeletal loads; biological agents; chemical substances; and deviant working hours.
Key informants have mentioned 'stress/burn-out' as another major health and safety issue. This issue is strongly related to the three remaining main risk factors identified as such upon the literature information in the majority of the ten countries. So, it is concluded that the Hospital Sector faces seven main risk factors. Three of them regard the physical working environment, two factors represent organizational constraints and two main risk factors concern the social work environment. An overview of these main risk factors and the related health problems is presented in Table 1.

*Table 1:* *Main risk factors and related health problems in the Hospital Sector, according to researchers in a majority of the ten countries and according to opinions from key informants*

| **Main risk factors** | **Related health problems** |
|---|---|
| Musculo-skeletal loads:<br>- strenuous working postures<br>- strenuous manual handling | musculo-skeletal diseases<br>premature ageing<br>repetitive strain injuries<br>occupational accidents |
| Biological agents:<br>- micro organisms<br>- viruses<br>- contaminated blood | infectious diseases<br>occupational accidents |
| Chemical substances:<br>- harmful to the skin<br>- harmful to the respiratory system | skin diseases<br>allergic respiratory diseases |
| Deviant working hours:<br>- shift patterns<br>- night work | sleeping problems<br>gastro intestinal diseases<br>tiredness<br>back pain<br>stress related problems<br>disruption of the biological rhythms of the exposed |
| Relations with clients and the public:<br>- confrontation with pain and with dying people<br>- violence at work | stress<br>emotional disturbances<br>burnout |
| Division of work and job content:<br>- lack of autonomy and control<br>- monotonous work (some categories) | stress<br>burnout |
| Relations with colleagues:<br>- lack of teamwork<br>- work in isolation<br>- lack of support and feedback | no data but likely:<br>stress<br>burnout |

In addition to the previous conclusions on distinguished risk factors, it should be noticed that safety conditions are not identified as a main risk factor. In a majority of the countries, however, slippery floors and stairs are one of the main causes for occupational accidents.
Furthermore, it is concluded that the main health consequences in the Hospital Sector regard skin diseases, viral hepatitis, unspecified infectious diseases, tuberculosis, respiratory diseases, and musculo-skeletal diseases.

Looking towards the future, it is concluded that both positive and negative effects on working conditions are expected from the main trends in the Hospital Sector, including the EC induced ones. The negative effects particularly affect the work organization and can be summarized as 'a continuous increase of work load and physical load finally resulting in an increase of burn-out and sickness absenteeism'. The positive effects regard several topics: a general improvement of health and safety standards; the improvement of health and safety policy in hospitals; the creation of Health and Safety Committees; the promotion of health and safety services; and also a decrease of the number of workers suffering from musculo-skeletal diseases, especially back complaints.

**Main risk groups**
Although all workers in the Hospital Sector will be affected to a greater or lesser extent by risk factors in the physical, organizational and social work environment, some groups are more at risk. Researchers in a majority of the ten countries identified three main risk groups from the literature information. These groups and the main hazards to which they, more than others, are exposed are presented in Table 2. These three risk groups represent an important part of the employees in the Hospital Sector.

*Table 2:* *Main risk groups and main risk factors in the Hospital Sector and the main hazards to which they are exposed*

| **Main risk groups** | **Main risk factors** |
|---|---|
| Nurses<br>(11 - 44% of hospital workers) | musculo-skeletal loads<br>deviant working hours<br>division of work and job content<br>biological agents<br>chemical substances<br>relations with clients and the public |
| Service and tradeworkers<br>(2 - 30% of hospital workers) | musculo-skeletal loads<br>chemical substances<br>biological agents<br>division of work and job content<br>deviant working hours |
| Nurse assistants and apprentices<br>(10 - 27% of hospital workers) | musculo-skeletal loads<br>biological agents<br>chemical substances<br>ionizing radiation<br>division of work and job content<br>deviant working hours<br>relations with clients and the public |

In addition to this two other professional categories, although representing only a small part of the

employees in the Hospital Sector, are identified as a risk group, that is laboratory workers and anaesthetists.

**Actions and policies**
Data on preventive and control measures, although limited, indicate that hospitals across Europe have implemented solutions on all the main risk factors. Furthermore, in a majority of the ten countries the health and safety policy of hospitals include Health and Safety Committees or Works' Councils, Prevention Services, and self-audits, but usually not to the extent one would expect considering the legal requirements. However, the implementation of the EC frame work directive (89/391/EEC) and some national activities are likely to enhance policy making capacities of hospitals, amongst others by the spreading of self-audits and Prevention Services.

At sectorial level various improvement activities have been undertaken on most of the main risk factors. However, it can not be concluded that in all countries all risk factors are covered by the undertaken improvement activities. In a majority of the ten countries the Hospital Sector is familiar with agreements on health and safety issues in collective bargaining; action projects on health and safety issues; training and educational structures and material; research programmes and (sectorial) magazines on health and safety issues. Various other sectorial policy instruments on occupational health and safety are however less widespread. These include: sectorial Health and Safety Committees and sectorial funds, subsidies, grants or prizes.

At national level several health and safety instruments exist as well, which affect the Hospital Sector. Common instruments in the ten countries are: specific health and safety legislation; governmental inspection and enforcement organizations; ill-health and disability insurances and compensation arrangements; and databases with health and safety information. A main conclusion is further that the statistical data on the Hospital Sector's health and safety output show serious deficits in most countries. These deficits, concerning the availability, the quality and inter-national harmonization of the data, mostly require improvement activities on national level.

## Policy options for further improvement

Policy options for further concern individual hospitals, social partners and other organizations at sectorial level, and also governments at national level. Some options have cross-national aspects, and thus affect the European level. The policy options are entirely based on the national reports, thus including the opinions of the key informants from employers' organizations, unions, governmental bodies and other organizations relevant to the sector.

**Policy options for hospitals**
Hospitals should give priority to improvement activities in four main areas:

1. *The physical work environment* and particularly the prevention and control of musculo-skeletal loads, biological agents, and chemical substances. For all these risk factors, a whole range of measures at various levels of prevention are described in the study report, which hospitals could consult to get ideas and take decisions on. The most preventive measures are, from an occupational health point of view, being recommended.

2. *The organizational work environment*, particularly on two topics. Hospitals should compose work schedules which provide a healthy balance between work load and recovery. The work organization should be improved, as well as the relations between the various occupational categories (medical and non-medical health care personnel).

3. *The social work environment* could be improved on two topics: relations with clients and the public, and relations with colleagues.
   Improvement activities are: the development of a special policy to prevent violence at work; the introduction of new nursing concepts; training of staff and workers and providing information about the health and safety risks at work.

4. *The health and safety policy*. Recommendations in the study vary from paying attention to all risk groups in the hospitals and not only towards nursing and caretaking staff, to the application of health and safety management systems in order to develop a preventive policy. Compliance to legislation in force should obviously be a point of attention, particularly concerning risk-assessment, Health and Safety Committees and Prevention Services.

**Policy options for sectorial organizations**
Social partners and other sectorial organizations are recommended to support and stimulate the improvement activities in the hospitals. Considering the opinions from key informants, the following priorities are most likely to get support from these organizations:

1. *The physical work environment*. Sectorial organizations could initiate a cross-national evaluation and subsequent development of practical information material for hospitals on already existing solutions in the various countries. Interesting information sources are known to exist in Belgium, France, Denmark and the United Kingdom. The practical brochures, guidance notes or alike should be disseminated to hospitals in the national languages. Sector organizations could take further initiatives and stimulate the introduction of further ergonomic corrections based on the results of already performed prevention programmes and stimulate the design of new uniforms.

2. *Training and information of workers and staff*. Sectorial organizations could develop special training programmes and/or information campaigns on specific topics like biological agents and violence at work. Furthermore they could stimulate the integration of health and safety issues in the regular vocational training and educational programmes.

3. *Hospitals' health and safety policy*. The encouraging and supporting of hospitals to create permanent commissions superintending the health and safety conditions of the work environment, and to implement safety audits, safety statements and occupational Health Services in the sector.

Besides taking initiatives directly aimed at improvements in hospitals, sector organizations could contribute in more indirect ways as well. For example by reconsidering, establishing or intensifying the usage of *sectorial policy instruments*, such as agreements in collective bargaining, health and safety funds, and sectorial health and safety organizations. Another relevant initiative could be to organize regular *cross-national information exchange* between social partners, other sector organizations, governmental bodies and health and safety experts. The exchange should firstly concern new initiatives on health and safety in the sector across Europe, for example via a paper or electronic news letter. Secondly, knowledge and experiences could be transferred via seminars and work shops, thus sharing good practices, experiments and successful solutions.

**Policy options for national governments**
National governments are recommended to undertake activities in three prioritized areas.

1. *Statistical data on occupational health and safety*. To ensure a useful monitoring system within the Hospital Sector, national governments could take initiatives to improve the

availability, the quality and the international harmonization of statistical data.
Such activities obviously call for co-operation with national institutes for statistics, Occupational Associations, and other registering organizations. Furthermore they could be attuned to the now running harmonizing projects at European level regarding occupational accidents and occupational diseases.

2. *National legislation and enforcement.* Governmental bodies should ensure a uniform and stronger enforcement within hospitals of the national legislation in force. The enforcement should regard both specific risk factors, and health and safety policy of hospitals. Furthermore, European legislation relevant to the Hospital Sector, should be implemented so that cross-national harmonization of standards is realized as much as possible, without lowering current national standards however.

3. *European legislation and enforcement.* National governments could stimulate further legislation at European level, for example on European Works' Councils, or collective bargaining at European level. They could also encourage the estabiishment of an effective European organization enforcing national compliance with European regulations. Such activities will not only be beneficial to the Hospital Sector, other sectors will profit by them as well.

# 1 Introduction

## 1.1 Context of the study

In the European Community (EC), it is increasingly recognized that the sectorial level could provide the right level for preventive action with regard to working conditions. The European Foundation for the Improvement of Living and Working Conditions (the Foundation) has undertaken research on the Construction Industry in its Four Year Programme 1989-1992. Moreover, the recent First European Survey on the Work Environment 1991-1992 has provided useful indications on sectors and issues which could be selected for action, and on profiles of the groups at risk in these sectors. Furthermore, the third action programme of the European Commission in the field of health protection at work identified some sectors as being 'high risk sectors' (Construction, Fishing Industries and Agriculture). Besides these activities at European level, a number of branch based action programmes and research programmes for the improvement of the work environment has already been developed in most EC-countries over the past years.

This situation has led the European Commission's Advisory Committee for Safety, Hygiene and Health Protection at Work early 1993 to recommend that 'high risk' sectors should be a specific area for action. It also recommended "improving the gathering and dissemination of reliable, authorative and comparable data", through in particular "standardized surveys about working conditions".

In addition to its Four Year programme 1993-1996, the Foundation implemented the Committee's recommendation in September 1993 by starting the project 'Monitoring the Work Environment at Sectorial Level'. In the project, a method has been developed and applied to gather and analyse data, which results in a description of the occupational health and safety situation in a sector across Europe. This first study with such an evident European sectorial approach, may prove to be a starting point at European level for a new way of working in the field of working conditions. This approach may effectively supplement the other, so far mainly used orientations on for example specific risk factors, risk groups and policy instruments in Europe.

At the start of the study, it was decided to 'experiment' with this sectorial approach in two sectors, namely the Meat Processing Industry and the Hospital Sector. The choice of these sectors was based on being both well represented in all EC-member states, having an important economic weight, and on the expectation of sufficient information being available. Furthermore, these sectors represent an industrial and a service sector, which was also considered valuable from the viewpoint of experimenting.

This report contains the description of the working conditions in only one sector, the Hospital Sector. The results on the Meat Processing Industry are presented in a separate report. The Foundation will disseminate both reports, and will use both of them for the evaluation of the experimental sectorial approach.

## 1.2 Aim of the study and the report

The study has been carried out to get a overview of the working conditions in the Hospital Sector across Europe. The main objectives of the study were:

1. To identify risks, risk factors and groups at risk within the sector.
2. To identify possible preventive measures which could be undertaken for further improvement of the working conditions in the sector.

Furthermore, as already mentioned in section 1.1, the study was meant to be an experiment on a sectorial approach to the improvement of working conditions, at European level.

The aim of this consolidated report is not so much to present a detailed comparison between countries. Instead, the report aims to be a synthesis which describes the most prevalent characteristics of the Hospital Sector across Europe, and particularly its situation with regard to the work environment.

Thus, the report is first of all meant as a tool for policy makers, both from social partners in the Hospital Sector, and from governments. It may enable them to discuss the national and international health and safety situation in the sector. From there they can move on to formulating and implementing internationally attuned improvement policies.
Secondly, the report may be of interest to anyone else who is interested in either the working conditions in the Hospital Sector across Europe, or the methodology of a European sectorial approach to working conditions, which has been the frame of this study.

## 1.3 Methodology

The study was set up to be carried out by national research institutes from each of the twelve EC-member states. Since institutes from Luxembourg and Italy appeared unable to participate, the study has taken place in the following ten countries (country codes used in the text hereafter are put between parentheses):

| | |
|---|---|
| Belgium (B) | Ireland (IRL) |
| Denmark (DK) | The Netherlands (NL) |
| France (F) | Portugal (P) |
| Germany (GER) | Spain (SP) |
| Greece (GR) | United Kingdom (UK) |

In Annex I an overview is given of the participating institutes and authors.
For the purpose of the study, a so-called sector profile was drafted by a small steering group of participating researchers from four countries, and two representatives from the Foundation. The profile provided a uniform structure for each participating country to gather and report the national information on the sector.
The structure consisted of the following sections:

- Description of the context.
- Health and safety output.
- Description of the work environment.
- Strategies and policies, instruments and structures aimed at improving health and safety in the sector.
- Interviews with key informants.
- Conclusions.

The draft profile and guidelines were presented, explained and discussed within the Advisory Committee, consisting of representatives from all participating institutes, and from unions, employers' organizations and government at EC-level (see Annex 2). A final version, with only limited adjustments, was provided after a brief pilot study in which the profile was tested in two

countries. The national data gathering and reporting took place from January till October 1994.

The data on the sector has been gathered from information sources such as statistics, registers, surveys, literature, regulations and key informants from employers' organizations, unions, governmental bodies and other relevant organizations. This means that the study is mostly based on already existing information, being both quantitative and qualitative, and being both 'hard' and 'soft' data. The statistical information mostly covers the period 1989-1993, or parts of that period. The other information is as recent as possible, and therefore often stems from more or less the same period, and sometimes even from 1994.
Most countries consulted a large number of information sources, both with respect to the work environment and other issues in the profile. The Danish data on the work environment mostly stem from a survey in 1990. The Spanish data on working environment are based on several studies done in some general hospitals.
Besides utilizing existing information sources, key informants from employer's organizations, unions, governmental bodies and other relevant organizations were interviewed. Such interviews were held in all ten countries, except Ireland. The objective of this interviewing was to obtain the parties' view on the health and safety situation in the Hospital Sector in their country, which formed a specific part in the profile, as well as in this consolidated report (see chapter 4). In addition, consultation of key informants took place in some countries in order to get access to information sources, to have the data in the draft national report checked, or to find supplementary information which was then processed in the appropriate parts of the national report.

Besides providing support to the national reporting, the uniformity of the profile was chosen in order to facilitate the global comparison between the countries, and thus facilitate the consolidation of the national reports into this overall report. Despite the efforts of all ten countries to use the profile as it was designed, it has appeared that all of them have encountered some problems, which also affect the consolidation.
In the first place, data were not available on all issues in each country, either due to non-existence, or to the restricted time period of the study. Secondly, differences exist between countries in definitions and classifications used in national reporting and registration systems. Differences also regard the circumscription of the sector, for instance the subsectors being in- or excluded in the national studies. Moreover, the heterogeneity of the working conditions within the sector and its subsectors was not much accounted for in the profile.
These factors occasionally impeded the comparison and interpretation of data in the preparation of this consolidated report. To ensure that data were correctly presented and interpreted, the draft version of the consolidated report was sent to all participants for comment and discussed in a meeting of the Advisory Committee. The amendments have resulted in this final report. Hence, despite the impediments, the obtained information was judged to be both quantitatively and qualitatively sufficient, to compose this synthetical picture on the occupational health and safety situation in the Hospital Sector across ten EC Member States.

## 1.4 Structure of the report

Firstly, chapter 2 summarizes briefly the ten country reports on the Hospital Sector. Thus, an overview is given of the social economic context of the sector. Here one can find figures and more qualitative information on the labour market, the economic situation, and organizations playing a role in the sector. Moreover, a general description is given of the production process and the work activities that take place in the Hospital Sector. Furthermore, the main trends in the sector are being summarized. Finally, a brief characterization of the sector in each country is presented, both with regard to general developments, and with respect to the working conditions.

Chapter 3 provides the main information on the occupational health and safety situation in the Hospital Sector in the ten countries. Firstly, information on consequences of working conditions is given, by presenting data on occupational accidents, diseases, sickness absenteeism, disablement and mortality in the sector. Secondly, main risk factors are being identified, both in the physical, the organizational and the social work environment. Ill-health and other consequences of these factors are also described, as well as interesting examples of preventive and control measures. Risk groups will be dealt with in the third section of this chapter. The section thereafter presents an overview of the policies and instruments aimed at improving the working conditions. Here, data on the organization of prevention are given, and the position regarding the policy development is being characterized, both on company level and on sectorial level. Furthermore, undertaken improvement activities such as action programmes, education, information and research are being presented. The chapter finishes with a discussion and preliminary conclusions on the identified risk factors, problems, and groups at risk, in relation to the undertaken actions and policies.

Chapter 4 deals with the view of social partners, government and other organizations, relevant to the sector, on the health and safety situation in the Hospital Sector. An overview is given of their opinions on the major health and safety issues in the sector, the policies and solutions they propose accordingly, the trends in the sector they foresee, and their expectations from the European integration. These opinions will be confronted with each other, in order to find both agreements and disagreements between unions, employers' organizations, government and other sector related organizations. The opinions will also be discussed in relation to the findings in chapter 3, which will result in some preliminary conclusions.

Final conclusions on risk factors, related problems and groups at risk are drawn in chapter 5. In addition, policy options are being sketched here for further improvement of the occupational health and safety situation in the Hospital Sector throughout Europe.

For a proper understanding of the material presented hereafter, it must be stressed to the reader that if issues are not described in this report for a given country, this does not necessarily mean that they are not present in that country. It only means that the national reports and authors did not provide the required information on that subject.
Also, it should be noted that the remark 'no data available' in this report, means that data were not obtainable within the given time period of the project or were not existing.

A last remark for readers who can not find enough time to read the entire report. It is being suggested to them to restrict themselves to the Summary and Chapter 5, containing the final conclusions and policy options for further improvements at hospital level, sector level, and national level. There, they will find all the headline information this report contains.

# 2 Social economic background and country characteristics of the Hospital Sector

This chapter will give an overall impression of the Hospital Sector, both at European level as well as at national level. Hence, the first section provides information on the social economic context of the sector across ten European countries. The second section is entirely focused on the national level, describing briefly the characteristics of the sector in each country.
When speaking about the Hospital Sector we are not confined to the activities in hospitals only, but we refer to all activities taking place in hospitals, nursing homes, sanatoria and similar health institutions (NACE-code 85.11 - Hospital Activities). It should be noted, however, that for Denmark and Ireland the activities in nursing homes are not included.

## 2.1 Social economic background of the European Hospital Sector

The social economic background of the Hospital Sector in ten European countries will be described on four issues. Firstly, information on the labour market is given. Thereafter, some information on the economic situation of the sector is presented, which is followed by information on organizations playing a role in the sector. Finally, a general description is given of the work process and the work activities that take place in the Hospital Sector.

**Labour market**
In Table 1 the number of institutions in ten European countries is given. The total number of institutions in the Hospital Sector varies between 98 for Ireland and 5,118 for the United Kingdom. Five countries (B, DK, GER, NL, and P) mention that the number of institutions is decreasing. In Greece the number of institutions is stable. In Spain the number of small hospitals (less than 100 beds) is continuously decreasing, while the number of hospitals with 100 or more beds is stable of even increasing. For the other countries no data regarding decrease of increase are available.
Where available we have also made a distinction between public and private institutions and other. In most of the countries we find hospital activities in both categories. In Denmark and the Netherlands there are very few private institutions. The private institutions in Greece and the United Kingdom are most likely to employ less than 50 employees. Other institutions are found in Germany (mainly church owned hospitals), in Ireland (voluntary hospitals privately owned by religious orders and boards of governors) and Spain (Red Cross, church and beneficent hospitals).

In Table 2 information is given about the people employed. The total number of people employed in the Hospital Sector varies between 60,620 in Ireland (number of employees in public hospitals only) and 1,600,900 in the United Kingdom. In all countries the percentage of female workers is higher than the percentage of male workers. It varies from 65% in Spain to 80% in Denmark.
In most countries the employment in the public sector is clearly dominant ($\geq$ 64%), except for Belgium where most people (62%) work in the private sector.
The figures for educational level are not in all countries available and where available they are difficult to interpret. In Belgium and the Netherlands the self-employed doctors and specialists with a scientific education are for instance not included in the figures. In Belgium the nurses and the laboratory workers have an educational level on either intermediate of high vocational level. In Germany the group 'high vocational and scientific education' corresponds with the group 'medical doctors' and all other employees attached to the hospital sector are included in the group 'intermediate/lower vocational education'. In Greece the percentage workers with a high vocational or scientific education is high compared to the other countries. It is mentioned here that the education level of the health personnel has increased enormously during the last decade.

*Table 1:* *Number and type of institutions in the Hospital Sector*

| | B | DK | F | GER | GR | IRL | NL | P | SP | UK |
|---|---|---|---|---|---|---|---|---|---|---|
| **INSTITUTIONS** | | | | | | | | | | |
| Number of institutions (total in sector) | 505 | 106[1] | 3,841 | 2,381 | 383 | 98[2] | 759 | 215 | 2,326 | 5,118 |
| Type of institutions | [3] | | | | | | | | [4] | |
| ▸ Public institutions | - | 104 | 1,069 | 959 | 150 | 36 | - | 121 | 345 | 408[5] |
| ▸ Private institutions | - | 2 | 2,772 | 341 | 235 | 36 | -[6] | 94 | 316 | 4,710[7] |
| ▸ Others | - | | | 1,081 | | 26 | - | | 152 | |

1) Denmark: hospitals only
2) Ireland: hospitals only
3) Belgium: it is not known how many hospitals belong to the public sector and how many to the private sector. The number of hospital beds in the public sector is 31,500 (38,5%) and in the private sector it is 50,500 (61,5%)
4) Spain: the number of institutions according to type is only known for hospitals (813 in total)
5) United Kingdom: the number of public hospitals represent the number of Hospital Trusts
6) Netherlands: there are very few private institutions
7) United Kingdom: the number of private institutions is made up of 210 independent hospitals and about 4,500 registered nursing homes

*Table 2:* *People employed in the Hospital Sector according to gender, % of working population, educational level, status of contract and professional category*

| PEOPLE EMPLOYED COUNTRIES | B | DK | F | GER | GR | IRL | NL | P | SP | UK |
|---|---|---|---|---|---|---|---|---|---|---|
| Total number in the sector | 113,486 | 103,069[1] | 1,038,000 | 1,011,427 | 90,200 | 60,620[2] | 325,000 | 84,220 | 362,200 | 1,600,900 |
| % of national working population | 3.7% | 4% | 4% | - | - | 5% | 5.5% | - | 2.9% | - |
| Gender: | | | | | | | | | | |
| ▸ Male | 21% | 20% | - | 25% | 33% | 25% | 30% | 31% | 35% | 18% |
| ▸ Female | 79% | 80% | - | 75% | 67% | 75% | 70% | 69% | 65% | 72% |
| % of working population in: | | | | | | | | | | |
| ▸ Public sector | 38% | 100% | 72% | - | 90% | 64% | 100% | 87% | 78% | 95% |
| ▸ Private sector | 62% | < 1% | 28% | - | 10% | 36% | < 1% | 13% | 22% | 5% |
| Educational level: | | | | | | | | | | |
| ▸ High vocational / scientific education | - | 11%[3] | 8%[4] | 10% | 40% | 56% | - | 10%[5] | 11% | 16% |
| ▸ Intermediate/lower vocational education | - | 64%[3] | 92%[4] | 90% | 60% | 44% | - | 82%[5] | 89% | 84% |
| ▸ other education | - | 26%[3] | - | - | - | - | - | - | - | - |
| Status of contract: | | | | | | | | | | |
| ▸ Full-time | 62% | 70% | 87% | 76% | 99% | 67% | 48% | - | 97% | 54% |
| ▸ Part-time | 38% | 30% | 13% | 24% | <1% | 33%[6] | 52% | - | 3% | 46% |
| Professional category: | | | | | | | | | | |
| ▸ Medical Doctors | 2%[7] | 11% | - | 10% | 20% | 7% | 2%[7] | 20% | 17% | 6% |
| ▸ Other health care professionals | 4% | - | - | 14% | 8% | 7% | 1% | 1% | 1% | 5% |
| ▸ Nurses | 44% | 29% | 29% | 39%[8] | 11% | 42% | 42% | 25% | 25% | 51% |
| ▸ Other nursing staff | 13% | 22% | 22% | - | 27% | - | 10% | - | 23% | - |
| ▸ Other health care supportive personnel | 5% | 15% | - | 11% | 6% | - | 15% | 7% | 4% | - |
| ▸ Administrative and clerical workers | 15% | 26%[9] | 11% | 7% | 8% | 11% | 11% | 12% | 9% | 16% |
| ▸ Service and Tradeworks | 18% | - | 19% | 16% | 20% | 30% | 17% | 2% | 14% | 13% |

1) Denmark: Number of employees in hospitals only
2) Ireland: Number of employees in public hospitals only
3) Denmark: data about educational level concern health personnel only; the group 'other education' includes other kinds of employees attached to the hospitals
4) France: data concern public hospitals only
5) Portugal: data concern public hospitals only
6) Ireland: the % of part-timers includes season-workers, training and locum
7) Belgium / Netherlands: not included the self-employed medical doctors and specialists
8) Germany: The professional category 'nurses' (38,6%) is represented by nurses and other nursing staff (ad. 3 + 4)
9) Denmark: The professional category 'administration and service personnel' (ad 6 + 7) represents 26% of the employed workers in the hospital sector

The percentage of people working full-time varies from 48% in the Netherlands to 99% in Greece. Belgium, the Netherlands, Spain and the United Kingdom mention that more female workers than male workers are working part-time.
The figures for the percentage of people employed per professional category point out some remarkable differences. In Belgium and the Netherlands the percentage of medical doctors is rather low compared to the other countries. However, as already mentioned the self-employed doctors are not included in the statistics of these countries. The percentage of nurses and other nursing staff is in several countries (B, DK, F, NL, SP, UK) around 50%. In Germany, Greece and Portugal the percentage of nurses and other nursing staff is lower.
In most countries there is no statistical information about the employment of immigrant workers in the Hospital Sector. In Belgium the number of immigrant workers is increasing in urban areas. In France all permanent workers in public hospitals must have the French nationality. In Germany the percentage of immigrant workers is about 4%, which is decreasing. In Greece the percentage of immigrant workers is about 1%. It is mentioned that there are restrictions for the employment of immigrant workers since their employment is limited to some private clinics. In the United Kingdom there is also no statistic information, but it is likely that employees from ethnic minority groups will be employed in the sector according to the prevalence of ethnic minorities in a particular area. It is also mentioned that there are steady numbers of professionals from outside the United Kingdom working in the Hospital Sector on a temporary basis, mainly to gain experience before returning to their own country.

In most countries there is also no statistical information about the number of unfulfilled vacancies in the Hospital Sector. In Belgium at the present time there is a shortage in nursing personnel. For some years special training courses have been organized for nurses who quit the profession years ago and now want to re-enter. In Denmark the unfulfilled vacancies as regards physicians constitute 2%. Unfulfilled vacancies among nurses have received great attention during the recent time due to among other things the newly introduced leave arrangements. In Germany a lot of medical doctors is without a job (approximately 20,000), and on the other hand there is also a discussion about the shortage of nursing people in hospitals. In the Netherlands some years ago there were shortages in nursing personnel, but nowadays qualified personnel is hardly demanded. In the United Kingdom there does not appear at the present time to be any difficulty in filling up jobs within the sector. Although there is some evidence that a number of nursing vacancies is unfulfilled it is suggested that this is more likely due to the fact that in order to save money no effort is made by the hospital management to fill up the vacancies and that the management prefer to leave the vacancy temporarily unfulfilled. In the United Kingdom a trend is highlighted that the hospitals of the National Health Services contract out to private contractors the running of services like catering, cleaning, portering, gardening, building maintenance etc. It is estimated that about 10% of people working in the National Health Service hospitals are no longer directly employed by the hospital management. These employees have now poorer pension schemes and other fringe benefits.

**Economic situation**
In Table 3 the total turnover as a percentage of the Gross National Product is given. The total turnover as a percentage of the Gross National Product varies from 1.9% for Belgium to 10% for France. In Belgium, Germany, Greece and the Netherlands the total expenses of the hospitals have increased. In Germany an increase of 10% over 1992 is reported as compared to 1991.
In Denmark from 1980 to 1990 a weak falling trend in total turnover was seen.
For Greece and the United Kingdom it is reported that private hospitals and private nursing homes are likely to operate on a profit making base.

*Table 3:* *Economic information on the Hospital Sector*

| | B | DK | F | GER | GR | IRL | NL | P | SP | UK |
|---|---|---|---|---|---|---|---|---|---|---|
| **ECONOMIC INFORMATION** | | | | | | | | | | |
| Total turnover (as % of Gross National Product) | 1.9% | 4.0% | 10.0% | - | 8.0% | 7.5% | 4.5% | - | 4,7% | 2.6% |

*Table 4:* *Organizations playing a role in the Hospital Sector*

| | B | DK | F | GER | GR | IRL | NL | P | SP | UK |
|---|---|---|---|---|---|---|---|---|---|---|
| **SECTOR ORGANIZATIONS[1]** | | | | | | | | | | |
| ▸ Number of employers' organizations | 2 (2) | 3 (0) | 2 (2) | 1 (1) | 6 (6) | 1 (1) | 3 (2) | 1 (1) | 1 (1) | 3 (3) |
| ▸ Number of unions | 9 (4) | 3 (3) | 7 (?) | 2 (0) | 5 (3) | 3 (3) | 6 (6) | 8 (6) | 4 (4) | 8 (5) |
| ▸ Number of other organizations | 4 (4) | 1 (1) | 1 (1) | - | - | - | 6 (3) | - | 2 (2) | 1 (0) |

1) The first figure refers to the total number of organizations that are given; the number of sector specific organizations among these organizations is mentioned between parentheses

**Organizations in the Hospital Sector**

Table 4 gives the number of organizations playing a role in the sector. In all countries employers' organizations are found. The number of employers' organizations in a country varies between 1 (GER, IRL, P and SP) and 6 (GR). Most of these employers' organizations are sector specific, some are general. In all the countries general and sector specific unions are found. The number of unions in a country varies between 2 (GER) and 9 (B).
In six countries other organizations which are especially relevant to the sector are mentioned. In Denmark, France and the United Kingdom 1 other organization is mentioned, while in the Netherlands 6 other organizations are active. Most of these organizations are sector specific.

**Work process and work activities**

The main activity in a hospital is the caring for the patients who have been admitted, including medical treatment, nursing and relational care. There are also many subsidiary activities which, at least in large hospitals, will also be carried out on the same site. These will include the production of medicine in the pharmacy; the preparation of meals; washing of linen and clothing; sterilisation of instruments and equipment; routine laboratory procedures for diagnosis; the provision of cleaning and portering services; the manufacture of specialized equipment; and general maintenance work.
In addition, in some hospitals there may be research work as well as educational activities undertaken in the laboratories either independently or in conjunction with adjacent universities.
In some psychiatric hospitals and mental homes specific therapeutic programmes are carried out.

The materials used will include a wide range of pharmaceuticals and laboratory chemicals, disinfectants, nursing requisites, cleaning materials, engineering materials, materials relevant for the therapeutic programmes, and food.
In most hospitals the use of high technology equipment for diagnose and treatment, including extensive use of computers, is part of daily routine for the vast majority of the hospital staff.
Another material is information: a vast amount of information has to be collected, treated, transmitted, used and stored.

The means used in the work process will be mainly medical and surgical equipment, laboratory and kitchen equipment, laundry equipment and sterilisation equipment but will also include lifting machines, various engineering tools, and machines and tools relevant to the therapeutic programmes.

The various work processes carried out in a hospital can not be characterized by using an industrial nomenclature. The caring for patients will be a continuous process although one not normally regarded as such, whereas most other processes would in industrial terms be regarded as batch production. In spite of the high degree of medical technology, the main characterization of hospital work is that it is hand work (personal contact and cure), hence labour intensive and not easily mechanized or automated.

In hospitals a variety of organizational structures, relevant to the kind of services, are found. In some countries we find the traditional hierarchical work organization with an authoritative position of doctors and specialists. In other countries the work is organized in various units or divisions and each unit or division is strongly organized around the activity of the medical doctors in charge of the treated pathology. When referring to the six types of organization described by Mintzberg in his 'The Structuring of Organizations', generally speaking, the hospital can be characterized as a 'professional bureaucracy'.

**Main trends in the sector**

Several main trends can be identified when considering general developments in the Hospital Sector across Europe.

The first trend which can be noticed in the Hospital Sector in most countries is the steady increase of the expenses. However, due to general economic constraints hospitals have to reduce their costs. A high percentage of all costs concern personnel costs. Work in hospitals is mainly characterized by hand work (personnel contact and cure), it is labour intensive and not easily automated.

Another trend regards the ongoing development in the use of high technology equipment for diagnose and treatment. As a result more diseases can be treated, which also has resulted in a higher demand for a more intensive care. A more rapid turnover of patients has also resulted in an increase of the intensive care.

Several countries mention the introduction of quality management systems in hospitals in order to raise the level of treatment and care.

The implementation of the various EC-directives of occupational health and safety is another trend which will most probably affect the work situation in the Hospital Sector. Directives of specific relevance to the Hospital Sector are: the frame work directive 89/391/EEC, amongst others obligating the undertaking of risk assessments and the provision of some form of Prevention Services to workers; the directives on carcinogenic substances (90/394/EEC), on biological agents (90/679/EEG); on manual handling (90/269/EEC); on personal protective devices (89/686/EEC), and on woman workers during pregnancy (92/85/EEC).

Several countries report that implementation has taken place or is taking place now, but an overview of its effectuation across the ten countries can not be presented from the data obtained.

## 2.2 Characteristics of the Hospital Sector in each country

This section contains summaries from the ten studied countries. It thus presents a brief characterization of the Hospital Sector in each country, including the social economic situation, general developments and issues related to working conditions. Here again, it must be noted that characteristics mentioned for one country might be presented in others as well, for which it is however not explicitly mentioned, because in the national report it was not notified as such.

**Belgium**

In Belgium the Hospital Sector counts 505 hospitals and clinics with 113,486 employees, which is 3.7% of the national labour force. Most hospitals (443) employ over 100 persons. The majority of the personnel (61.5%) is working in the private hospitals. The workers are mostly female. An average of nearly 40% of the employees work part time (most women and 'lower' functions). There appears to be an increase in immigrant workers in urbanized areas.

The expenses in the Hospital Sector have risen enormously during the last 10 years.

With 2 employers' organizations and 9 unions the sector seems to be well-organized, but there are separate structures for private and public hospitals and within the unions there is also a distinction between blue-collar and white-collar workers.

The work organization in hospitals changes more and more, due to the fact that a highly technical treatment has to be used, that patients stay less time in hospital and that there is a quick 'turnover' of patients and medical progress.

The incidence rate and the severity of the occupational accidents are lower than the national average. Accidents are mainly caused by persons falling, by contact with fixed and moving objects, by contact with toxic agents, and by wrong movements. With respect to the physical work environment the identified main risks are biological agents, musculo-skeletal loads, chemical substances, ionizing and non-ionizing radiation. The main risk factors in the organizational work

environment are deviant working hours, division of work and job content. Main risk factors in the social environment concern relations with patients, relations with colleagues and relations with management.
In Belgium the policy and relations on safety and health are mostly organized for all professions and all sectors. The course of a policy for safety at work is set within the hospital itself and the first level of generalization is the subsector. Therefore, increasingly attention is paid to initiatives on the sectorial level.

**Denmark**
In Denmark the Hospital Sector counts 106 hospitals with approximately 100,000 employees. Except for a few hospitals established within the past few years, all hospitals belong to the public sector. The public hospitals employ more than 99% of the employees. Ten to fifteen years ago the Hospital Sector was composed of a relatively small number of large hospitals with a high degree of specialization, located in the big cities and quite a number of smaller hospitals in the provincial towns. Through the late seventies and the early eighties a number of these smaller hospitals were closed leading to large and medium-sized hospitals only.
With regard to the employment situations nurses do not, contrary to most other occupations, face unemployment.
As almost every sector in the country, the Hospital Sector experiences economical constraints.
The sector is well organized with 3 employers' organizations and 3 main unions.
Use of high technology equipment is a part of daily routine for the vast majority of the hospital staff today. Due to the new technology, among other things, it is possible to cure or treat diseases, which a few years ago would have resulted in death or a miserable life. Furthermore, it is possible to save prenatally born children as well as to help severely injured persons. This in turn has resulted in a higher demand for a more intensive care. A more rapid turnover of patients is another reason for the increase of the intensive care. A modernisation of the education system for nurses and nurse assistants has been introduced recently, in order to meet this requirement. Quality management systems have been introduced at many hospitals with the aim of raising the level of the treatment and care. Everybody at a ward should be able to provide the same high standard of care.
The number of occupational accidents with work interruption and the number of fatal accidents is continuously decreasing. They are at the same level or at a lower level than in other sectors. Occupational accidents are mainly caused by lifting, pulling and pushing, by falling, rocking and overturning objects, by working with sharp objects and by slippery floors. The main occupational diseases in the sector are musculo-skeletal diseases and skin diseases. With respect to the physical work environment, the identified main risks are musculo-skeletal loads, and chemicals harmful to the skin. The main risk factors in the organizational work environment are shiftwork and problems related to conflicting demands. Main risk factors in the social environment concern relations with colleagues and relations with clients and the public.
At sectorial level and at hospital level the policy on health and safety is characterized in the national report as 'well-developed'. Quite some activities to improve the working environment in the sector have already been taken, but more can be done. It is expected that occupational health services will be established in the Hospital Sector within this century. Furthermore, it is crucial to enhance and strengthen the function and the capabilities of the safety organizations / committees in the hospitals themselves.

**France**
The French Hospital Sector employs 1,038,000 persons (4% of the working population) in 3,841 hospitals. In the private sector there are far more hospitals than in the public sector, but the majority of the personnel (about 72%) is working in public hospitals. Especially in small towns, the hospital is often the first employer in the area. The recruitment of low qualified workers is not

a problem, but the recruitment of highly qualified workers like doctors and nurses, may be difficult in some areas. From a general point of view, after a period in which it was difficult to recruit nurses, the profession has found again a power of attraction.
The Hospital Sector is concerned by the general policy of reducing the expenses of health care. The global expenses in medical care were in 1992 10% of the Gross National Product.
The Hospital Sector is characterized by a very rapid change in both therapies and technologies.
The sector is supported by 2 employers' organizations, 7 unions and 1 other organization.
The average occurrence of occupational accidents is 4%. Main causes are slips, trips and falls, handling patients and handling material. Main occupational diseases are viral hepatitis, undefined diseases, skin diseases, tuberculosis and infectious diseases.
Musculo-skeletal loads, biological agents and safety conditions have been identified as the main risk factors in the physical work environment. In the organizational environment the main hazards are the division of work, work rhythms and time constraints as well as autonomy and control. Problems in the social work environment are closely related to the organizational environment, but the relation with patients is considered to be a main risk factor.
Policies on health and safety matters are being characterized in the national report as 'beginning' both for hospital level and sectorial level. Hospitals are beginning to take into account working conditions problems, after a long period in which this subject was not considered as very important. Under the pressure of the economical constraints (reducing budgets), the management considers more frequently that improving working conditions may also be a mean to improve efficiency. The same remark can be made at the sectorial level with respect to the public sector. The private sector, however, does not seem to have developed such an active policy.

**Germany**
In Germany the Hospital Sector employs more than 1 million people in 2,381 hospitals and clinics. The majority of the workers is female, has an intermediate of lower vocational education and works full-time. In this country a lot of doctors are without a job (approximately 20,000), but on the other hand there is a discussion about the shortage of nursing people in the hospitals. The turnover rate is rather high in the sector.
The expenses in the Hospital Sector have risen with about 10% in one years' time. The total annual turnover is 43,900 millions ECU's, 67% of all the costs are personnel costs. The hospitals have to reduce costs. They try to do so, but at the same time they try to improve services (nursing), technology, quality and organizational structures.
The sector has one employers' organization and two unions.
The growing use of modern technologies for diagnosis and therapy leads to an increasing specialization in hospitals. Moreover, there is a trend to establish modern communication techniques in the hospitals.
Figures on occupational accidents are not available for the sector. Nevertheless, it is known that accidents are mainly caused by equipment (e.g. syringe cutting tools and diagnosis equipment), slippery floors and stairs. The main occupational diseases are skin diseases, infectious diseases and respiratory diseases. Sickness absenteeism is outstandingly high in hospitals, compared with other sectors.
Main risk factors in the physical work environment are chemical substances and musculo-skeletal loads. Division of work and deviant working hours are the main hazards in the organizational environment. Main risks in the social environment are in the field of relations with management, relations with colleagues and relations with patients.
According to the national authors, hospital policies on health and safety can be characterized as 'partly developed' or 'well-developed' depending on the size of the institutions. At sectorial level the health and safety policy is characterized in the national report as well-developed. There is, however, a need for better organizational concepts related to the division of work between doctors and nursing staff.

**Greece**

The Hospital Sector consists of 383 hospitals and clinics, which employ about 90,000 persons. Although there are more hospitals and clinics in the private sector than in the public sector, population health care needs are mainly covered by public hospitals and the majority of the personnel (90%) is working in public hospitals. Clinics have a secondary role and most clinics employ less than 50 persons. The majority of the workers in the sector is female, has an intermediate or lower vocational training and works full-time.

The public sector has developed enormously in the eighties. In the past there was a shortage of qualified nurses. This does not exist any more after efficient educational planning. In Greece there is an excess of medical doctors. Young doctors have limited opportunities for a hospital career. New technology is widely applied during the last decade, but there is a shortage of qualified personnel for its maintenance and exploitation.

The expenses of the public hospitals and part of the expenses of the private clinics are covered by social security and the deficits of the public hospitals are covered by the annual budget of the Ministry of Health.

The sector seems to be well-organized with 6 employers' organizations and 5 unions.

The average occurrence of occupational accidents is about 0.01%, which seems to be underestimated. Accidents are mainly caused by sharp objects and by slips, trips and falls. The main occupational disease is hepatitis, which is also the only occupational disease being recognized by the social security for health personnel.

Main risk factors in the physical work environment are biological agents, musculo-skeletal loads, chemical substances and radiation. Deviant working hours, work rhythms and time constraints, as well as division of work and job content are main risk factors in the organizational work environment. Problems in the social environment are related to relations with patients, relations with colleagues, lack of participation and information, and unequal opportunities.

Policies on health and safety matters are being characterized in the national report as 'beginning' both for hospital level and sectorial level. On the sectorial level efforts are made to promote protection against infectious diseases. It is foreseen that health and safety services will be created in the future and that the unions will develop a more active role.

**Ireland**

The Irish Hospital Sector consists of 98 hospitals. The 62 hospitals which belong to the public sector employ about 60,000 workers, which is approximately 5% of the national working population. The majority of the personnel is female and works full-time.

The total annual expenses in the Hospital Sector are 7.5% of the Gross National Product.

The sector is supported by one employers' organization and 4 unions.

The average occurrence of occupational accidents with work interruption is 1%. Main causes are handling and lifting, violence, sharp objects, slips and falls, machinery and equipment.

The main risk factors in the physical work environment are musculo-skeletal loads, biological agents, chemical substances and safety conditions. In the organizational work environment the main hazards are work organization and job content, working hours and overtime payments. In the social work environment risk factors are lack of information and consultation, relations with management, unequal opportunities, violence at work and sexual harassment.

On hospital level policies on health and safety are being characterized in the national report as 'partly developed', on sectorial level as 'beginning'. Further improvements in health and safety are expected. In 1994 for the first time a fund has been set aside by the government, which is available to be used for health and safety purposes. Public hospitals are being encouraged by the government to set up occupational health units.

**The Netherlands**

The Dutch Hospital Sector counts 759 hospitals and nursing homes with about 325,000 workers, which is 5.5% of the total national working population. The majority of the workers is female and works part-time. Staffing was a serious problem. Changes in personnel was about 20% each year. However, the labour market has recently changed. Nowadays qualified personnel is hardly demanded and sometimes even dismissed.

Hospital activities are a substantial part of the Dutch economy. The investments in buildings in the sector is circa 9.6% of the total national investments. The total annual expenses in hospital activities are 4.5% of the Gross National Product. The sector experiences severe economical constraints. The number of hospital beds is reduced and smaller hospitals are subject to forced take-overs.

Of all the hospitals and nursing homes 20-25% are under control of the local government; the others are under control of a private management. This does not mean, however, that these hospitals are private companies. The state government plays an important role in financing the hospitals and nursing homes.

The sector is well organized with 3 employers' organizations, 6 unions and 6 other organizations.

In hospitals the use of high technology is very common.

The average sickness absenteeism in the health care sector is higher than the national average. The sickness absenteeism in the nursing homes is generally higher than in the hospitals.

Biological agents, musculo-skeletal loads, safety conditions and climate conditions are the main risk factors in the physical work environment. Main hazards in the organizational environment are time patterns, work organization and job content, as well as wage payment. Risk factors in the social work environment consist of relations with colleagues, relations with management, relations with clients and the public and lack of information, consultation and participation.

Policies on health and safety are characterized in the national report as 'partly developed', both on hospital level and sectorial level. A sector policy on health and safety has recently been developed and will be implemented in the next four years. Emphasis will be on so-called 'self-activity' projects to realize Health and Safety management systems in the hospitals, and on prevention activities on sectorial level to get more grip with the causes of work-related risks. Promoting the use of workfriendly machines and materials, an optimum workplace and safe and healthy work methods is another important activity foreseen in the sector policy.

**Portugal**

In Portugal the Hospital Sector employs 84,220 persons in 215 hospitals and clinics. The majority (87%) of the personnel is working in hospitals. The Health Sector is one of the greatest employers in the Portuguese Public Administration. It is, however, important to mention that there are also service lending enterprises (kitchen, cleaning, vigilance) engaged by the large health units. The workers of those enterprises, while working in the Health Sector and running the same professional risks, are not inserted in the health statistics, neither in the public sector nor in the private sector.

The majority of the workers in the Hospital Sector is female and has an intermediate and lower vocational education.

No data are available on the economic situation of the hospital sector.

The sector is supported by 1 employers' organization and 8 unions.

The average occurrence of occupational accidents is about 1%. Accidents are mainly caused by contact with mechanical instruments like scissors, needles, bistouries, but also by factors in the physical work environment (noise, vibrations, radiation, temperature, chemical substances and biological agents).

In Portugal, no data are available neither on the main risk factors in the physical, organizational and social work environment nor on policy on health and safety.

**Spain**

The Hospital Sector in Spain counts about 2,300 institutions with approximately 362,000 employees. This number includes the three levels of health care in the curative domain: medical services offering diagnostic, therapeutic or preventive treatment to ambulatory patients, and hospitals which house the patient during the health care process. The hospitals and clinics are predominantly located in medium or big cities (67%) and the rest (33%) in small cities or villages.

The number of hospitals is 813 which have approximately 178,000 beds. There is an increasing trend of National Health Service hospitals and a decreasing trend for all the other hospitals. There is also another characteristic trend in relation to the type of hospital. The general hospitals are increasing continuously and specialized hospitals decrease dramatically except for psychiatric hospitals (short and long stay that remain more or less constant) and elderly and chronic institutions which number was in 1991 about three times the number of 1984. Specialized hospitals are becoming a department of the general hospitals.

A great deal of the health care workers is working in public hospitals (about 78%). The majority of the working population in the health care sector is female and has an intermediate or lower vocational education and works full-time.

The total annual turnover is 4.7% of the Gross National Product. The hospitals, specially the teaching hospitals, are becoming more complex as modern technology increases the range of diagnostic capabilities and expands the possibilities for treatment. During recent years a combination of medicine and engineering has produced a vast array of new instrumentation, materials and equipment, new laboratory procedures and surgical techniques increasing the demand for more highly trained staff and enhancing the significance of the question of cost-effectiveness.

The sector is supported by 1 employers' organization, 4 unions and 2 other organizations.

Approximately 7.5% of all the workers in the sector had an occupational accident yearly. Accidents are mainly caused by overexertion and strenuous movements, by slips, trips and falls on same level, by objects and tools, and by falls from heights. Most occupational accidents occur to nurses and assistant nurses.

The main risk factors in the physical work environment are unsafe working conditions, musculoskeletal loads, chemical substances, biological agents and radiation. In the organizational work environment the main hazards are bad general work organization, work overload, lack of personnel and equipment, and deviant working hours. No data are available on the main risk factors in the social work environment.

Policies on health and safety are characterized in the national report as 'partly developed', both on hospital level and on sectorial level.

**United Kingdom**

In the United Kingdom the Hospital Sector is dominated by the National Health Service hospitals. Within the National Health Service there are 2,555 hospitals with a total of 310,000 beds. In the private sector there are about 210 independent hospitals and about 4,500 registered nursing homes. The number of people employed in the sector has been rising slowly but steadily over the past years. The current total is 1,600,900. The majority of the workers in the hospital sector is female, is working in the public sector, has an intermediate and lower vocational education and is working full-time.

The total annual turnover for the National Health Service hospitals is 17,352 million ECU's.

The sector is supported by 3 employers' organizations, 8 unions and 1 governmental organization, the latter playing an active role in the negotiations with the unions on behalf of the employers.

The management structure of hospitals within the National Health Service is at present undergoing a period of major change. In recent years the hospitals have been run by the District Health Authorities but increasingly, as a result of the National Health Service and Community Care Act 1990, independent trusts are being established to manage the hospitals with District Health

Authorities relinquishing control of the operational unit to the trust.
A result of these changes is that while in the past conditions of employment were the same throughout the country it is now possible that these may change in different areas.
Another important change in work organization which has taken place in recent years has been the privatisation of many sectors of work in hospitals whereby the employees instead of being employed directly by the hospital board, are employed by contractors who have submitted tenders to undertake work on behalf of the hospital board. The areas where this has occurred have been mainly in catering, cleaning, portering and laundries.
The average occurrence of occupational accidents is 0.007%, but it is estimated that fewer than one third of the injury accidents are reported. Main causes are person to person assault, manual handling of patients, being struck against something, working with needles and sharp material.
With respect to the physical work environment the identified main risks are musculo-skeletal loads, biological agents, chemical substances and radiation. The main hazards in the organizational work environment are duration of work, deviant working hours and repetitive work and task duration. Main obstacles in the social environment concern relations with management, relations with clients and public, unequal opportunities for women, and lack of employment opportunities for disabled workers.
In the United Kingdom the various aspects of organization of prevention are available both on hospital level and on sectorial level. The current emphasis is on ensuring that the management of health and safety within the hospital sector receives as much attention as the other management problems which are being created by the recent reorganizations in the management structures of the hospitals within the National Health Service. There is a growing realization that good health and safety management can be cost effective and the studies on the costs of accidents have clearly shown the savings which can be achieved by managing the health and safety problems in a more coherent way.
A variety of improvement activities is also available. There is a broad correlation between the strategies for improvement suggested by the trade Unions and the Health and Safety Executive, and the management and there is also broad agreement on those risks which still exist and which need to be tackled.

# 3 *Overview of the occupational health and safety situation in the Hospital Sector across Europe*

This chapter presents the main information of the occupational health and safety situation in the Hospital Sector in ten European countries. Firstly, information on consequences of working conditions is given, by presenting data on occupational accidents, occupational diseases, sickness absenteeism, disablement and mortality in the sector. Secondly, main risk factors are being identified, both in the physical, the organizational and the social work environment. Ill-health and other consequences of these factors are also described, as well as interesting examples of preventive and control measures. In the third section of this chapter risk groups will be dealt with. The fourth section gives an overview of the policies and instruments aimed at improving the working conditions. Here, data on the organization of prevention are given. The position regarding the policy development is being characterized, both on company level and on sectorial level. Furthermore, undertaken improvement activities such as action programmes, education, information structures and research are described. The chapter finishes with a discussion and preliminary conclusions on the identified risk factors, problems, and groups at risk in relation to the undertaken actions and policies.

## 3.1 Health and Safety output

In this section information is given on health problems related to the working conditions in the Hospital Sector. It is apparent ***that statistical data on occupational accidents are best available***. To ***some extend figures also exist*** with regard to ***occupational diseases, morbidity*** and ***sickness absenteeism. Data on disablement and mortality in the sector are rather poor however.***
It must be emphasized that comparison between countries of the statistical data obtained can be very misleading. This is due to the differences in reporting and registration systems or practise, and to lack of explanatory information thereon. Furthermore, some of the provided figures on some countries (NL, UK) not always exclusively concern the Hospital Sector, but also related sectors like the whole Health Cart Sector. Exact information on the population to which the figures refer is in many cases also lacking.

### Occupational accidents

Table 5 gives the available information on occupational accidents. In this table a distinction is made between all accidents, accidents with work interruption and fatal accidents. For most countries two numbers are given, they refer to the lowest and highest number per year occurring in the period 1989 - 1992. Where only one number is given, this refers to the most recent figure available. Denmark, Greece, Ireland, the Netherlands and the United Kingdom mention that there is a serious underregistration of occupational accidents.
The number of all accidents per year is available for 6 countries (GR, IRL, NL, P, SP, UK); it varies between 14,670 (SP) to 16 (GR). The number of all accidents in % of workers per year varies between 7.5% (SP) and 0.006% (UK). We have to mention however that for Spain the number of all accidents includes the commuting accidents.
The number of accidents with work interruption per year is available for 9 countries (all but GER); it varies between 29.600 (F) to 16 (GR). The number of accidents with work interruption in % of workers per year varies between 4% (F) and 0.006% (UK).
The number of fatal accidents per year is available for 7 countries (B, DK, F, GR, NL, SP, UK); it varies between 12 for Spain and $< 1$ or 0 for the other countries.

*Table 5:* *Occupational accidents in the Hospital Sector according to consequences (1989-1993)*

| | B | DK | F | GER | GR | IRL | NL | P | SP | UK[1] |
|---|---|---|---|---|---|---|---|---|---|---|
| **OCCUPATIONAL ACCIDENTS** | | | | | | | | | | |
| All accidents: | | | | | | | | | | |
| ▸ Number per year | - | - | - | - | 16-38 | 182 - 495 | 1,200 | 941-1,179 | 9,876-14,670[2] | - |
| ▸ % of workers per year | - | - | - | - | 0.01-0.02% | 2.2-6.2% | 0.03% | 0.93-1.13% | 7.5% | - |
| Accidents with work interruption: | | | | | | | | | | - |
| ▸ Number per year | 3,722-4,321 | 1,791-2,089 | 29,600 | - | 16-38 | 358-454 | 1,200 | 657-779 | 7,749-10,965[3] | 9,294-10,809 |
| ▸ % of workers per year | - | 2%-2% | 4% | - | 0.01-0.02% | 0.9-1.2 | 0.03% | 0.63-0.75% | - | 0.006% |
| Fatal accidents: | | | | | | | | | | |
| ▸ Number per year | 0-1 | 0-1 | 0[4] | - | < 1 | 0 | 0 | - | 3-12 | 0-3 |
| ▸ % of workers per year | - | 0%-<1% | - | - | < 0.001 | 0 | 0% | - | - | - |

- = No data available

1) United Kingdom: figures are only available for the whole Health Service Sector
2) Spain: All accidents with work interruption including commuting accidents, which represent around 18,3% of all yearly accidents. The ratio accidents on the way to and from work in the hospital sector is for instance six time greater that in the meat industry
3) Spain: All accidents with work interruption occurring in the company and during the habitual work
4) France: only fatal accidents during transport between work and home are reported, they are not mentioned here

*Table 6:* *Notified occupational diseases in the Hospital Sector (1989-1993)*

| | B | DK | F | GER | GR | IRL | NL | P | SP | UK |
|---|---|---|---|---|---|---|---|---|---|---|
| **OCCUPATIONAL DISEASES*** | | | | | | | | | | |
| ▸ Skin diseases | 1 (46-81) | 2 (155-194) | 3 ( 48) | 1 (746) | - | - | - | - | 3 (23-58) | - |
| ▸ Viral Hepatitis | 3 (29-39) | - | 1 (128) | - | (130)[1] | - | - | - | 2 (37-62) | 2 (15-42) |
| ▸ Infection diseases unspecified | 4 (19-26) | 5 (13-25)[2] | 5 ( 34) | 2 (262) | - | - | - | - | 1(175-264) | 3 (15-28) |
| ▸ Tuberculosis | 2 (26-56) | - | 4 ( 46) | - | - | - | - | - | - | 4 ( 7-12) |
| ▸ Respiratory diseases | - | - (15-20) | - | 3 (103) | - | - | - | - | - | 1 (57-69) |
| ▸ Musculo-skeletal diseases | - | 1 (258-362) | - | 4 ( 61) | - | - | - | - | - | - |
| ▸ Undefined diseases | - | 3 (22-66) | 2 ( 58) | - | - | - | - | - | - | - |
| ▸ Allergies | - | 4 (23-27)[3] | - | - | - | - | - | - | | - |

- = no data available

*) N.B.: The first figure represents a ranking of the incidence of notified occupational diseases. Figures between parentheses are respectively the highest and lowest annual number of cases in the period 1989-1993 (B, DK, UK); for France the number between parentheses is the total number of cases in 1992, for Germany the total number of cases in 1991. The figures for Germany are related only to the 355,297 assured employees of the Berufsgenossenschaft für Gesundheitsdienst und Wohlfahrtspflege (about 35% of the total people employed in the Hospital Sector)

1) Greece: between parentheses the total number of cases of viral hepatitis for the period 1989-1993 is given. Only one occupational disease is mentioned as hepatitis is the only one acknowledged by the social security for health personnel

2) Denmark: viral hepatitis is included in this category

3) Denmark: allergic skin diseases are not included in this category but inserted in the category 'skin diseases'

The professional category with the most notified occupational accidents is the group ***'nurses and other nursing staff'***. In four countries (DK, GR, P, SP) it is mentioned that the majority of the notifications concerns this group (in Denmark this group includes however the medical doctors). In three other countries (B, GER, IRL) this group is mentioned in the 'top 5' of risk groups for occupational accidents. Another group which is mentioned in seven countries (B, DK, GER, GR, IRL, SP, UK) to have a relative high accident rate is the group 'service and tradeworkers' (like maintenance, cleaning, hotel, transport, laundry). Other groups with a high incidence of occupation accidents as mentioned in at least four countries are 'other health care supportive personnel (like technicians, social workers, etc.) and 'medical doctors'. In some countries the group 'other health care professionals' is also mentioned in the 'top 5'.
The main causes of accidents which are mentioned in the country reports by at least four countries are:

- ***contact with sharp objects*** like injection needles, cutting tools, bistouries, etc. (B, DK, GER, GR, IRL, P, SP, UK);
- ***slippery floors and stairs*** resulting in falls on the same level or from heights (B, DK, F, GER, GR, IRL, SP, UK);
- ***(manual) handling of patients and non-patients***, resulting in overexertion, strenuous movements etc. (B, DK, F, IRL, SP, UK);
- ***contact with patients***, resulting in person to person assaults (B, GER, IRL, UK).

**Notified occupational diseases**

Table 6 gives the available information on notified occupational diseases. For six countries (B, DK, F, GER, SP, UK) it is possible to give a ranking of the occurrence of occupational diseases. Number 1 indicates that the concerning disease is the most frequent, number 5 indicates the less frequent disease. In Greece only one occupational disease is mentioned as hepatitis is the only occupational disease acknowledged by the social security for health personnel.
The figures between parentheses refer to the number of cases of the various occupational diseases per year. For four countries (B, DK, SP, UK), in fact two figures are given between parentheses, which refer to the lowest and the highest number of cases of occupational diseases per year in the period 1989-1993. The occupational diseases are arranged according to the highest ranking in the various countries, which shows that ***skin diseases, viral hepatitis, unspecified infectious diseases, tuberculosis, respiratory diseases*** and ***musculo-skeletal diseases*** are the ***most frequent occupational diseases***.

**Morbidity**

In Table 7 for seven countries (F, GER, GR, IRL, NL, SP, UK) data are given for morbidity. For five countries (F, GER, IRL, NL, SP) it is possible to give a ranking of the type of illness. Number 1 indicates that the type of illness is the most frequent, number 5 indicates the less frequent illness. The figures between parentheses (when given) refer to the number of illnesses per year. The diseases are arranged according to the highest ranking in the various countries, this means that ***musculo-skeletal diseases, mental disorders, respiratory diseases*** and ***skin diseases*** belong to the main type of illnesses in the Hospital Sector.

**Disability**

Most countries have no information on disability. From only four countries (DK, GR, IRL, NL) information is obtained. It appears that the main causes for disability are ***musculo-skeletal diseases*** (DK, IRL, NL) and ***mental disorders*** (DK, NL). In Denmark respiratory diseases and diseases of circulatory system are also mentioned. In Ireland slips and assaults are also mentioned. The main cause for disability in Greece is accidents.

*Table 7:* *Morbidity in the Hospital Sector (1989-1993)*

| | B | DK | F | GER | GR[1] | IRL | NL[2] | P | SP | UK[3] |
|---|---|---|---|---|---|---|---|---|---|---|
| **MORBIDITY** *) | | | | | | | | | | |
| ▸ Musculo-skeletal disease | - | - | - | 2 | - (13,000-19,000) | 2 | 2 (24,861) | - | 2 | x |
| ▸ Mental disorders | - | - | - | x[4] | - | 1 | 1 (26,326) | - | 4 | x |
| ▸ Respiratory diseases | - | - | - | 1 | - | - | - | - | 1 | x[5] |
| ▸ Skin diseases | - | - | 1 (77)<br>3 (20)[6] | - | - | - | - | - | - | x<br>- |
| ▸ Infection diseases | - | - | - | - | - | - | 4 ( 7,638) | - | - | - |
| ▸ Other diseases | - | - | - | 3[7] | - | - | 3 ( 7,691)[8]<br>5 ( 7,419)[10] | - | 3[9] | - |
| ▸ Unspecified diseases | - | - | 2 (62) | - | - | - | - | - | - | - |

- = no data available

*) N.B.: The first figure represents a ranking of the occurrence of the type of illness. Figures between parentheses refer to the number of illnesses per year.
1) Greece: no data available for other diseases: the data concern nurses only.
2) Netherlands: the data refer to the Health Care Sector as a whole.
3) United Kingdom: 4 main diseases are reported, but no ranking is given.
4) Germany: a high number of psychic disorders is reported, but not taken into the ranking.
5) United Kingdom: the category 'respiratory diseases' refers to occurrence of 'occupational asthma'.
6) France: the category 'skin diseases' refers to the disease 'scabies'.
7) Germany: the category 'other diseases' refers to digestive diseases.
8) Netherlands: the data refer to pregnancy, which in the Dutch social security system is reported as a 'disease'.
9) Spain: the category 'other diseases' refers to the nervous system and sense organs.
10) Netherlands: the data refer to injuries/poisonings.

*Table 8:* *Sickness absenteeism in the Hospital Sector (1989-1993)*

| | B | DK[1] | F | GER | GR | IRL | NL | P | SP | UK |
|---|---|---|---|---|---|---|---|---|---|---|
| **SICKNESS ABSENTEEISM** | | | | | | | | | | |
| Lost days per year (as % of calender days) | - | - | 11.0% | 10.5% | 2.5%[2] | - | 9.9%[3] | - | 5 at 6% | - |
| Frequency per year (rate of sick reports) | - | - | - | 1.8 | - | - | 2.0 | - | - | - |
| Average duration per year (days) | - | - | 19 | 21 | - | - | 17/15[4] | - | 38 at 40 | - - |
| Costs of compensation per year in million of ECU's | - | - | - | - | 12.2 | - | 502 | - | - | 240 |

- = no data available

1) Denmark: the figure available include the whole Social and Health Care Sector: these are not given here.
2) Greece: lost days as a % of working days (220 days per year)
3) Netherlands: the figures about sickness absenteeism refer to the Health Care Sector as a whole.
4) Netherlands: with and without pregnancy and maternal leave.

**Sickness absenteeism**
In Table 8 for five countries (F, GER, GR, NL, SP) figures are given on sickness absenteeism. The lost days per year (as % of calender days) varies from 2.5% (GR) to 11.0% (F). In Denmark, Germany and the Netherlands the average sickness absenteeism in the Hospital Sector is high compared to other sectors. In the Netherlands sickness absenteeism in nursing homes is even higher. For the United Kingdom there is no information available on sickness absence of all staff groups but only of nurses. Sickness absence among nurses varied from an average of 7 days per year in some hospitals to 22 days a year in others.

**Mortality**
In three countries (F, GR, UK) some information about mortality according to diagnosis is available. The main causes for mortality in the sector are accidents (F, GR, UK) and hepatitis (GR).

## 3.2 Work environment

In this section the work environment in the Hospital Sector in the European countries is described. The main risk factors in the physical, the organizational and the social work environment are identified and described in three separate subsections. Health and other safety problems related to these risk factors are also described, as well as interesting examples of applied or proposed preventive and control measures.

### *3.2.1 Physical work environment*

The main risk factors in the physical work environment identified as such in the national reports (see Table 9) are:
- ***musculo-skeletal loads*** (B, DK, F, GER, GR, IRL, NL, SP, UK);
- ***biological agents*** (B, DK, F, GR, IRL, NL, SP, UK);
- ***chemical substances*** (B, DK, GER, GR, IRL, NL, SP, UK);
- ***radiation*** (B, GR, NL, SP, UK).

Safety conditions are identified as a main risk factor in 4 countries (F, IRL, NL, SP) and climate/thermal conditions are identified as a main risk factor in 2 countries (DK, NL). Some other countries report situations with insufficient lighting, but it is a risk factor of some importance. Noise and vibration are risk factors to which workers in hospitals are exposed, but generally these are not considered to be a special problem in the Hospital Sector.

Hereafter will be focused on the four main risk factors in the physical environment, which will be described in more detail.

**Musculo skeletal loads**
In 9 countries (B, DK, F, GER, GR, IRL, NL, SP, UK) musculo skeletal loads are identified as a main risk factor. Hospital workers are exposed to ***strenuous working postures*** such as twisting, bending and kneeling. Add to this that hospital workers have to walk over great distances. Depending on the design of the working place distances up to 18 kilometre a day are mentioned. Standing work during a considerable part of the worktime is another aggravating factor, especially for nurses of surgical departments. A Spanish study showed that during the workingday the main postures of nursing staff and its attendants during its workingday are sitting for less than three hours a day and standing and walking during the rest of the day.

*Table 9:* *Main risk factors in the physical work environment in the Hospital Sector.*

| Country / Risk factor | B | DK | F | GER | GR | IRL | NL | P | SP | UK |
|---|---|---|---|---|---|---|---|---|---|---|
| Noise | | | | | | | | - | | |
| Vibrations | | | | | | | | - | | |
| Lighting | | | | | | | | - | | |
| Climate | | X | | | | | X | - | | |
| Radiation | X | | | | X | | X | - | X | X |
| Chemical substances | X | X | | X | X | X | X | - | X | X |
| Biological agents | X | X | X | | X | X | X | - | X | X |
| Musculo-skeletal loads | X | X | X | X | X | X | X | - | X | X |
| Safety conditions | | | X | | | X | X | - | X | |

X = identified as main risk factor in the Hospital Sector in this country;
- = no data available

Hospital workers are also exposed to ***lifting and handling heavy weights*** like patients, and to ***pushing and pulling heavy objects*** like beds and transport carts. A study in Greece mentioned that 80% of the nurses handle patients at least once a day, and that 15% of the nurses manipulate heavy objects more than 6 times a day. Statistics in Ireland show that handling and lifting consistently appear to be top causes of accidents in the Hospital Sector.
In several national reports it is mentioned that ***exposures to strenuous postures and heavy lifting seem to be more widespread in the Hospital Sector than in most other sectors of employment.***
It should be noticed that in hospitals the load to be handled is often the patient and this creates additional difficulties because the load in these circumstances cannot be repackaged or broken down into lighter components to make handling easier. This does, however, not alter the fact that measures should be taken to reduce the risk factors. Although the need to have mechanical lifting aids to assist in the movement of patients has long been recognized, it is mentioned that the infrastructure is not always sufficient. Beds, chairs and toilets, for example, are not adjustable. Lifting aids are not or insufficiently provided or under-used due either to the reluctance of patients to be lifted using these devices, or to the reluctance by the staff to use them fully.

***Musculo-skeletal diseases***, especially ***back pain***, are frequent in hospitals. In a French study 48% of the nurses (1500 women in 26 care units) complained about back pain within a 12-month period, which corresponds to 29% of absenteeism due to medical reasons. In the United Kingdom approximately half of all manual handling injuries reported to the Health & Safety Executive involved damage to the lower back and long periods of sickness absenteeism commonly followed. A study in Greece showed that more than 60% of the nurses had at least once an acute back pain during workingtime and 27% of the nurses had at least one day absence related to back pain. A Spanish study showed that 54% of nurses and 50% of the attendants suffer from back pain and that 23%, respectively 79% incurred in absenteeism.
The problem of back pain is more clearly focused on ***nursing staff***, but it occurs also among

*service and trade workers* (cleaning and catering staff). In Denmark for instance it is noted that jobs with a high number of musculo-skeletal diseases are assistant nurses, cleaners and nurses. Here it is also clear that the number of notified musculo-skeletal diseases is higher in the Hospital Sector than in other sectors.
In Belgium, France and Denmark effects of musculo-skeletal loads on ***premature ageing*** and ***lower weight of babies*** have been demonstrated with studies. A French study showed that the frequency of these pathologies is closely linked to the type of work, especially for 3 indicators: heavy load handling, standing for long periods and cleaning work. Risks can be twice as high (or even more) for women exposed to two of these indicators, than for women in normal conditions.
In the Netherlands nurses have been studied during and shortly after pregnancy. Complaints about physical work load increase two to four times during pregnancy. At the end of the second half of the pregnancy 50% of the nurses suffer from sleeping disorders, wooden bellies, and physical fatigue in the legs. One third of them has complaints about breathlessness and low back pain.
In Greece ***repetitive strain injuries*** are noticed among surgery nurses, administrative and laboratory workers. In Ireland repetitive strain injuries are noticed for office-staff.
High numbers of accidents caused by overloading by lifting, pulling or pushing and by handling patients are mentioned in respectively Denmark and the United Kingdom.

***Several prevention and control measures*** are applied or proposed. In most countries (B, DK, F, IRL, NL, UK) technical equipment has been introduced, like patient lifting equipment, variable height beds, and so-called 'Parker' baths and showers. In Denmark a study showed that during the last year about 1/3 of the Health and Safety Committees in hospitals has been involved in management of occupational health and safety problems concerning musculo-skeletal loads and that far the most members of the committees found that the solutions achieved were satisfactory. In Greece however, difficulties are mentioned to apply efficient ergonomic solutions. In the United Kingdom provision of better training and more comprehensive use of manual handling are proposed.
It has also been noted that the introduction of specialized equipment is insufficient if it is not inserted in a more global approach including work space and material conception and work organization. A good example is a project in Belgium with satisfactory results. The introduced techniques and equipment were adjusted to the type of work in the various departments and chosen after consulting the workers. Before introducing the equipment in the departments the workers have been taught to use it properly.
In other countries (F, GER, IRL, NL) workers are also trained in safe handling and lifting. In Ireland it is for instance mentioned that since the implementation of the EC-directives on manual handling of loads courses in Manual Handling Training have been set up in the Hospital Sector.
In order to protect pregnant workers against the risks of prematurity and giving birth to lower weight babies it has been proposed that they should be offered a different position, a lightened work-schedule and antenatal leave in case of clear overloading.
In the national report of the United Kingdom it has been proposed that apart from the use of lifting aids more needs to be done to ensure that employees involved in lifting heavy loads have adequate recovery periods, and that the other duties which they have to perform do not produce postural stress which could increase the possibility of back injury during lifting.
The ability to undertake manual handling tasks safely requires a freedom of movement and an ability, to achieve the appropriate posture. This is not always possible with the traditional female nurses uniform of a straight skirt and fitted bodice. Some employers have started to experiment with new designs of uniform including culottes and trousers which give female nurses much greater freedom of movement. This last suggestion is also made in the Belgium national report.
A final suggestion found in one of the reports is that the work should be organized in such a way that standing work alternates with sitting work, in order to prevent the occurrence of varices.

**Biological agents**

In 8 countries (B, DK, F, GR, IRL, NL, SP, UK) biological agents are identified as a main risk factor. Hospital workers have ***contact with patients and with blood***, and as a consequence they are exposed to biological agents such as ***micro-organisms, viruses*** and ***contaminated blood***. In general there are no data available on the number of exposed persons, but the risk of infection is considered to be a major hazard in all hospital work. The ways of infection are mainly by ***accidents involving needle-stick injuries*** and ***cuts from sharp objects.***

A Danish study showed that laboratory workers and cleaners in hospital laboratories have had excess risk for hepatitis infections and the prevalence of serological markers for previous hepatitis B has been shown to be increased among nurses, surgeons and hospital orderlies. The incidence of notified hepatitis B among physicians has decreased during a number of years. In Denmark it is noted that in 5% of the notifications received in the period 1989-1992, biological agents were mentioned as one of the exposures. In France the risk of exposure to blood has been evaluated to 0.036 incident per nurse and per month, which means 1 needle accident every 28 months. The risk of contamination by HIV in case of exposition to contaminated blood is evaluated at 0.3%. In the Netherlands results are reported of a quantitative risk estimation for the risk of work related hepatitis B and HIV infection via needle accidents in a general hospital. For HIV the infection risk is 0.015% for a 30-year working career and for Hepatitis B it is 1-5%. Several Spanish studies showed that the rate of biological risk accidents is about 8%.

***Several infectious diseases*** are distinguished such as ***hepatitis B, HIV,*** and ***other infectious diseases*** like tuberculosis, cytomegalovirus, salmonellosis, poliomyelitis, herpes, influenza and the methicillin-resistant staphylococcus aureas, and dysentery. The last mentioned disease being most prevalent among laboratory workers.

In Denmark in 1992, 4 cases of occupational hepatitis B were notified in the sector. In France hepatitis B was considered as a more frequent occupational disease among hospital workers of all professional categories (nurses, laboratory technicians, service and trade workers). Nevertheless, with the development of vaccination the number of occupational diseases has decreased from 222 cases in 1980 to 49 in 1987 and almost none today. In Greece the infection risk for hepatitis is 70% for hospital workers compared to 0.3% for the general population.

Regarding occupational infection by HIV no cases are known in Denmark, whereas in France 28 cases have been registered. Although in the past few years the attention has been focused on the infection risk for HIV, from the point of view of working conditions, hepatitis is a far more important hazard.

In Belgium a study on tuberculosis among 40,000 employers was carried out. The tuberculosis index is 3.7%, but among workers in the hospital sector the tuberculosis index is twice as high. In France an epidemiologic study for 10 years at the hospital of Marseille shows a frequency of tuberculosis a little higher than in the country.

A variety of ***prevention and control measures*** is applied or proposed. Vaccination and vaccination programmes are mentioned in several countries. In Belgium for instance vaccination is proposed for hepatitis, rubella, influenza and poliomyelitis. In France vaccination against hepatitis is obligatory since 1991. In Greece 39% of the hospitals apply a vaccination programme for hepatitis covering all population at risk. In 39% the vaccination for hepatitis is not complete and in 22% there is no vaccination at all. Only 2.6% of the hospitals apply a vaccination programme for tetanus and another 17% for tuberculosis, but these vaccinations are completed only among half of the personnel. In Ireland all staff at risk are vaccinated.

A good control of infection policy has been proposed, along with requirements to report outbreaks of infection to ensure that these are taken seriously. Another prevention measure is the regular control of exposed workers and biological monitoring on tuberculosis. In Ireland many hospitals have employed Infection Control Staff but there is need for all hospitals to have at least one

member of staff who is trained in this area. The use of personal protective equipment, like gloves, masks and work clothing is recommended. Pregnant workers should be transferred from certain risk departments.
In addition to a good work practice, general precaution rules should be introduced and respected. In Denmark special precaution related procedures to prevent blood borne infection at every work task which involves risk of exposure to human blood have been introduced, for instance the use of closed systems by blood testing and collection of used needles in closed containers.
For high risk work in for instance laboratories and post mortem rooms procedures have been developed for safe working in these areas, which divides the areas into zones according to the biological agents which are being handled or which are suspected. In Ireland procedures are set down in hospitals for the handling of sharp objects.
Hygiene training programmes should be regularly given. Besides information about the risks, in these programmes attention should also be given to the use of immunisation and the use of personal protective equipment.
In France information campaigns about precautions against contamination by HIV have been organized. The main factor concerns the respect of rules in the use of needles, especially the fact of not covering the needle again. In Spain it is proposed to promote legislation obliging employers to provide vaccine free of charge. In the United Kingdom guidances have been published which give advice on physical containment, immunisation policy, protective clothing, labelling of specimens, handling of sharps, dealing with spillages, disinfection, work procedures, washing facilities and personal hygiene.

**Chemical substances**
In 8 countries (B, DK, GER, GR, IRL, NL, SP, UK) chemical substances are identified as a main risk factor in the physical work environment. A great variety of chemical substances and materials are used in hospitals, some in very big quantities. A distinction is made between:
- Carcinogenic substances
- Reproductive and neuro toxicants
- Substances harmful to the skin
- Substances harmful to the respiratory system
- Other chemicals

Carcinogenic substances such as ***ethylenoxid*** and ***aldehydes*** are used for sterilisation purposes and as cytotoxic drugs. Although the hazard of exposure to chemical carcinogens is high, in general it seems to be a minor problem within the sector, because the risks are well known and because they are used in small quantities and in carefully controlled conditions. However, certain jobs such as laboratory workers might represent a specific risk group.
Reproductive and neuro toxicants, for instance the various ***anaesthetic gases*** and some ***drugs*** are used in hospitals. In some countries measurements in and around operating theatres have shown that the concentration of nitrous oxide was above the TLV's. However, in general, chemical reproductive and neuro toxicants are assumed to be a problem of minor importance for the sector as a whole, as the precautions taken to prevent exposure seem to be sufficient to avoid excess risk. However, laboratory workers and theatre staff, especially anaesthetists, may be exposed to specific hazards.
Substances harmful to the skin, such as ***cleaning agents*** and ***detergents*** are used in the sector. Many different allergens seem to exist in the sector. Some countries report a widespread exposure to substances harmful to the skin; in Denmark more than 20% and in Greece more than 55% of the employed personnel is exposed to these substances. In Denmark both health care personnel and cleaners are at risk and among health care personnel assistant nurses seem to be a group a excess risk.
Substances harmful to the respiratory system, such as ***disinfectants, cleaning agents*** and ***antibio-***

*tics* are used in hospitals. In Denmark, professional categories considered as a group with an excess risk for allergic respiratory diseases are laboratory workers and assistant nurses. The last mentioned group has also excess risk for non-allergic respiratory diseases. Greece has reported that more than 35% of the employees are exposed to substances recognized as allergens, but the conditions of exposure are not so hazardous, since many substances are packaged and are used under ventilation. In the United Kingdom asbestos insulation on the various services within the hospital system continues to cause concern. In recent years, there has been a massive exercise either to remove or seal the known locations of asbestos lagging materials. Nowadays asbestos is discovered in unknown locations, but procedures are now well established for its treatment.
Other chemicals are sometimes used as well. In most countries there are however no data available highlighting specific problems of exposure to other chemicals or dust.

From the above we can conclude that ***the main occupational and health problems in the sector*** seem to be a result of ***widespread exposure to chemical substances harmful to the skin and substances harmful to the respiratory system***. In Denmark skin diseases form 26% of the notified occupational diseases in the Hospital Sector. Moreover a study has shown that 30% of all employees in hospitals have or have had skin diseases, whereas another study on occupational groups which were most likely to develop a skin disease, showed that nurses and assistant nurses were among the groups at high risk.
In France hospital workers are considered as the first or second occupational category for skin diseases. A study of 1500 women in 26 care units showed that 15% had a continuous skin disease within the last 12 months, 10% were treated for eczema and 7% had another skin disease, but for only 3 persons it was recognized as an occupational disease.
As a result of the exposure to reproductive toxicants in Belgium a significant growth of the number of spontaneous miscarriage is found.

***Several preventive and control measures*** are applied or proposed. In general, adequate exposure prevention strategies should be performed in order to decrease the exposure risk, for instance chemical substitution, forced local and general ventilation, good storage and waste removal, teaching good work practices, appropriate protective devices, epidemiological and individual surveillance of workers.
In Denmark for working with carcinogenic drugs a range of precautions are taken to reduce the risk of exposure. This applies to both nursing and treatment of patients, and to blood test sampling and analysis of blood and tissue samples. In France the centralization of the preparation of the carcinogenic drugs is proposed if quantities and frequency of use are important. In many hospital laboratories in for instance Belgium and Denmark in order to avoid risk of reproductive damage it has been a practice that pregnant women are transferred from the workplace. In Denmark in 1994 the Danish Working Environment Services runs a campaign on reproductive agents at the workplace. Laboratories and laboratory work are among the main target groups and it is expected that this campaign will accelerate further the ongoing effects of lowering the risk of reproductive hazards so that women can continue their work during pregnancy. In Ireland there is an urgent need for correct implementation of guidelines on the safe handling and administration of cytotoxic drugs especially among nursing staff.
For several chemical substances alternatives can be used. In Denmark in hospital laboratories it has been shown that chloroform as extraction fluid in chromatography analyses may be substituted by butyl acetate or ethyl acetate. Moreover a pilot project pointed out that use of a method based on ethanol polyethylene glycol in combination with microwaves might be a substitute for the use of formaldehyde. Also, many efforts have been taken to avoid the use of xylene in histological laboratories. Several laboratories are at the moment involved in an investigation of vegetable oil as a substitute. More efforts to find safer alternatives are needed.
Moreover, other preventive measures showed effect. In Germany for instance, it has been possible

to achieve reasonably low exposure to the anaesthetics nitrous oxide, halothane, enflurane and isoflurane. This demands anaesthetic apparatus with only few and small leakage, active scavenging leading the gas out of the theatre, local exhaust with specially critical anaesthetic techniques, effective room ventilation, working techniques avoiding spillage of gas, check-up of tightness of the technical equipment and of the personnel's exposure level.

**Radiation**

In 5 countries (B, GR, NL, SP, UK) radiation is identified as a main risk factor in the physical work environment.

Ionizing radiation is used in hospitals for ***diagnostic, treatment*** and ***research purposes***. Exposure to ionizing radiation is a hazard which is widespread throughout the hospital sector. The risks of ionizing radiation are well-known and they can be kept under control provided that the necessary precautions are taken.

In the United Kingdom it has been estimated by the Health & Safety Executive that in diagnostic radiology the number of investigations carried out is about 35 million per year and medical exposure accounts for a further 100,000 cases. It is estimated that there are up to 30,000 employees in the hospital sector who are potentially exposed to ionizing radiation. In Denmark it is noted that exposure to X-rays are more widespread in the hospital sector than in all sectors as a whole, but still only few employees in the sector are thought to be exposed to X-rays. Exposure to X-rays is more widespread among nurses than in the sector as a whole, but also for nurses the exposure level is generally low and nurses therefore do not seem to be a group at an excess risk for occupational health and safety problems caused by ionizing radiation. In France it is noted that especially nurses can be exposed to risks in not well-controlled situations such as X-rays made to a patient in bed; X-rays made in paediatric services especially for babies who need to be hold to avoid unexpected movements; treatment to create for very short periods radioactive urines. Similar conclusions are drawn in a Spanish study, which reported that the most risky X-ray equipments are the portables which are misused. In some areas there is no good work practice: the exposed, especially those not appointed to X-ray radiotherapy departments as surgeons, traumatologists, do not use the protective devices and are not medical tested periodically.

Non-ionizing radiation is not used in hospitals to the same extent as ionizing radiation. ***Lasers*** are used to varying degrees in medicine. ***Ultra-violet light*** is used in some centres for skin treatment and in laboratories for microscopy and visualising fluorescent markers in tests. High magnetic fields are used in magnetic resonance imaging. In both Denmark and Greece it is estimated that exposure to non-ionizing radiation is approximately 1% of the employed in the sector.

In general, a limited amount of health problems is reported. In Denmark, in the period 1989 - 1992, four cases of ***cancer*** were notified as occupational disease with ionizing radiation mentioned as one of the exposures. In the same period in Denmark one case of ***eye damage*** and one case of ***skin disease*** were notified as occupational disease with non-ionizing radiation mentioned as one of the exposures. In the other countries no occupational diseases with this diagnosis are mentioned, but it is noted that ionizing radiation can cause internal infections and ocular damage.

In general, exposure to ionizing radiation is regulated and controlled by central or governmental organizations. The use of individual control equipment for workers directly exposed is for instance obligatory in Belgium, Denmark, France and Germany. In Greece in 82% of the hospitals 100% of the personnel which are exposed to X-rays use dosemeter and in 8% of the hospitals more than 80% of the exposed use dose meters. In the remaining 10% of the hospitals the exposed use dose meters in a non-systematical way. In the Netherlands the compliance with nuclear energy regulations in hospitals is considered poor according to a Labour Inspectorate inspection programme.

Other ***preventive measures*** which are proposed are the use of personal protection equipment like

impenetrable gloves and leaden aprons. In Denmark pregnant women are not allowed to be exposed to more than 2 mSv per year; in Belgium pregnant women are transferred from the workplace. Close observance of the requirements for radiation protection is necessary.
***Safety measures*** are proposed for the use of lasers. In France, for instance, workplaces in which lasers are used must be conceived to avoid accidental reflection and diffusion of rays, the trajectory of the laser must be determined and controlled, individual protection equipment like spectacles and gloves should be used. In the Netherlands a medical surveillance is proposed for laser workers in hospitals.

### *3.2.2 Organizational work environment*

The main risk factors in the organizational work environment as presented in Table 10 are:
- deviant working hours (B, DK, GER, GR, IRL, NL, SP, UK);
- division of work and job content (B, DK, F, GER, GR, IRL);

In 4 countries the following organizational aspects are mentioned as a main risk factor:
- Autonomy and control (B, F, IRL, NL);
- Work rhythms and time constraints (B, F, GR, IRL).

Duration of work is mentioned as a main risk factor in 3 countries (IRL, NL, UK).
Repetitive work and task duration, as well as wage payments and compensation systems are mentioned in one country only (respectively in UK and in NL).

*Table 10:* *Main risk factors in the organizational work environment in the Hospital Sector*

| Country / Risk factor | B | DK | F | GER | GR | IRL | NL | P | SP | UK |
|---|---|---|---|---|---|---|---|---|---|---|
| TIME PATTERNS: | | | | | | | | | | |
| Duration of work | | | | | | X | X | - | | X |
| Deviant working hours | X | X | | X | X | X | X | - | X | X |
| Other work time patterns | | | | | | | | - | - | |
| WORK ORGANIZATION AND JOB CONTENT: | | | | | | | | | | |
| Autonomy and control | X | | X | | | X | X | - | | |
| Work rhythms and time constraints | X | | X | | X | X | | - | - | |
| Repetitive work and task duration | | | | | | | | - | - | X |
| Division of work and job content | X | X | X | X | X | X | | - | - | |
| WAGE PAYMENTS AND COMPENSATION SYSTEMS | | | | | | - | X | - | - | |

X = identified as main risk factor in the Hospital Sector in this country;
- = no data available

Hereafter will be focused on the two main risk factors in the organizational environment, which will be described in more detail.

**Deviant working hours**

In 8 countries (B, DK, GER, GR, IRL, NL, SP, UK) deviant working hours are identified as a main risk factor in the organizational work environment.

Because of the need to provide a continuous service in hospitals, a wide variety of ***shift patterns*** is used. Deviant working hours, therefore, is a predominant problem for a major group of hospital workers. In Belgium about 83% of the nursing staff are exposed to shift work, either two, three or four shifts. In France about one third of the hospital workers are concerned by shiftwork, in Germany 48% (mostly three shifts) and in the United Kingdom 75% of the nurses. Apart from people who work in rotating shift patterns, there are others who work ***constant night shift*** (4% of the hospital workers in Denmark, 10% in France, 38% in Germany, 13% in the United Kingdom). In Denmark 56% of the workers have fixed day work.

In France it has been noted that people often make choices in favour of deviant working hours, especially night work, for reasons linked with familial and social life constraints, for instance children care. This has been recently reinforced by the reduction of working time to 35 hours a week in night work. In Germany it is mentioned that the bad work schedules are the most important reasons for leaving the jobs.

Shift work disrupts the ***biological rhythm*** of the workers and bad work schedules may result in health problems, like ***sleeping problems, gastro-intestinal diseases, tiredness, back pain*** and ***stress-related problems***. Shift work also disturbs the social and family life of the exposed workers.

A Danish survey among workers in the health care sector as a whole has shown that 22% has experienced feelings of irritability and nervousness without reason within the last three months. The same survey has shown that 27% of the workers in the health care sector has difficulty in concentration and experience amnesia.

A French study established that absenteeism rate is higher for the night shift. The influence of night work upon obesity is mentioned in several French studies. A Dutch study under a group of 500 qualified female nurses working in 16 different nursing homes, showed that 88% of the shift workers and 67% of the day workers suffered from gastro-intestinal disorders, which was considered to be a significant difference.

***Preventive and control measures*** concern mainly the improvement of the work schedules. The work schedules should be composed in such a way that shift patterns arise which minimize the disruption of the individual, and that attention is paid to the number of hours which is needed for recovery. In France it is recommended to organize a rapid rotation of shifts. The preference between permanent night work and alterant shiftwork is a subject that cannot be decided yet. A preventive measure which has been recently taken in France is the reduction of the work time to 35 hours a week when working in nighttime. A problem however is that the Ministry of Health has asked the hospitals to organize this reduction of time without creating new jobs, but by reorganizations. In the Netherlands a project on work scheduling is going on. The aim of this project is to develop a new method for designing work schedules for health care workers in order to provide a healthy balance between work load and recovery in case of abnormal working hours and to make a contribution to the health and well-being of workers.

**Division of work and job content**

In 6 countries (B, DK, F, GER, GR, IRL) division of work and job content are identified as a main risk factor in the organizational work environment.

Work in hospitals, especially for the ***professional medical staff***, is often characterized as interesting work with a high degree of autonomy. The content of the job of medical personnel is

however often ***highly complex*** and ***demanding persistent concentration***. In Denmark 87% of the workers in the sector are exposed to high job complexity and jobs with high concentration. In Germany this counts for 33% of the workers. Due to the further introduction of new technologies the possibilities for diagnoses and treatment have been enlarged. As a result, the number of patients is growing, as well as the complexity of care and cure.
Other hospital workers however, can suffer from the ***lack of control*** over how to perform their work. A Belgium study has shown that about 40% of the respondents suffer from the fact that their work has been interrupted by unforeseen circumstances like unexpected visits of medical doctors. Problems occur due to the fact that nurses have to co-operate with other services, like laboratories, radiology, kitchen. A special problem is caused by the internal transport of patients (a Belgium study showed that 91% of the respondents are confronted with this problem). Quite often the responsibilities and competences of each occupational category are determined separately by official texts. A major problem therefore is to coordinate several people acting separately to achieve a global care, considering the hospitalized person 'as a whole'. But nobody can really control all the dimensions and separations between the activities of the doctors and other categories are frequently observed. An Irish study showed that 61% of the nurses felt that they had to do too many non-nursing duties.
Workers can also be confronted with ***conflicting work orders*** given by medical doctors or charge-nurses.
The work of some ***supportive categories*** like service and trade workers is in most cases ***monotonous, without information***; these workers experience a ***lack of relation with other services, a lack of participation*** and ***limited promotion possibilities***.
The work of ***laboratory technicians*** is usually ***monotonous, repetitive, highly divided*** and ***complex with no support.***

The impact of all these factors upon conditions of health is mainly the existence of ***stress symptoms***, and ***burn-out*** in some cases. In Denmark, 45 cases of psychic disorders were notified in the sector. Moreover, 55% of the allocated disability pensions to male employees in the sector in the period 1983 - 1985 were due to psychic disorders. In Denmark it has also been reported that several occupational groups have excess for hospitalization due to gastric ulcer, and that female assistant nurses and male hospital orderlies have excess risk for hospitalization due to ischemic heart diseases.
In France it has been noted that hospital workers suffer from a mental work load due to a great deal of manipulation and processing of information, frequent interruptions and disturbances in the work, and a great deal of decisions to make. They also suffer from a psychical work load due to the confrontation with pain and death of patients, and to the relationship with patients and their families.
According to a French study, mental pathology and sleeping problems represent 12% of all days off for medical reasons, and the third cause of medical absenteeism. A Danish study showed that nurses in a high technology ward experienced psychical strain from analysing and interpreting the information which arise from the surveillance technology. They found the great amount of alarms and false alarms especially demanding. According to another Danish study nearly 25% of the female employers with higher education (medical doctors), nearly 15% of the nurses and 10% of the assistant nurses were exposed to psychical strain.

In general only ***very few preventive and control measure are proposed***. They all concern new ***nursing concepts***. In Belgium the proposed ideal is integrated nursing, which should lead to sufficient autonomy, contact with patients and a continuous caring. Until now it seems to be difficult to implement the integrating nursing concept due to the lack of employees or insufficient motivation to change the traditional work organization.
In Germany at the moment there is a broad discussion about 'holistic nursing'. There is a need for

good examples how to optimize the quality of the work organization in the hospital sector.
In the Netherlands a system of team nursing is proposed where all the nursing tasks are carried out by the qualified team members.

### *3.2.3 Social work environment*

The main risk factors in the social work environment as presented in Table 11 are:
- Relations with clients and the public (B, DK, F, GER, GR, IRL, NL, UK);
- Relations with colleagues (B, DK, GER, GR, IRL, NL);
- Relations with management (B, GER, IRL, NL, UK).

In 3 countries the following aspect of the social work environment are identified as a main risk factor:
- Equal opportunities (GR, IRL, UK);
- Information, consultation and participation (GR, IRL, NL).

Employment of disabled workers is mentioned as a main risk factor in one country (UK).
It should be noted that risk factors in the social work environment and their related health problems are closely related to the organizational work environment, because work in Hospitals cannot be separated from the human factor.

*Table 11: Main risk factors in the social work environment in the Hospital Sector*

| Country / Risk factor | B | DK | F | GER | GR | IRL | NL | P | SP | UK |
|---|---|---|---|---|---|---|---|---|---|---|
| Relations with colleagues | X | X | | X | X | X | X | - | - | |
| Relations with management | X | | | X | | X | X | - | - | X |
| Relations with clients and the public | X | X | X | X | X | X | X | - | - | X |
| Employment of disabled workers | | | | | | | | - | - | X |
| Equal opportunities | | | | | X | X | | - | - | X |
| Training and apprenticeship | | | | | | | | - | - | |
| Information, consultation and participation | | | | | X | X | X | - | - | |

X = identified as main risk factor in the Hospital Sector in this country;
- = no data available

Hereafter we will concentrate on the three main risk factors in the social environment.

**Relations with clients and the public**
In 8 countries (B, DK, F, GER, GR, IRL, NL, UK) relations with clients and the public are identified as a main risk factor in the social work environment. In the Hospital Sector there is a very close contact between staff employed and clients and members of the public who will often be related to or friends of the client. One of the problems to consider is the growing variety of the different type of public to cope with. A clear conception of what is the right service to offer for each of them is not always easy to get for workers.

Many of the employees experience an ***insufficient balance between ideals and goals*** for the patient care on one side, and the personal possibilities on the other side. Care workers suffer of not having enough time for the specific relational part of their job, as most workers are strongly motivated for it. On the other hand this relation can become more and more difficult on the psychological level, especially in case of confrontation with pain and dying people.
Another risk factor is ***violence at work***. In recent years, considerable attention has been given to the problems of violence to the staff which can range from anti-social behaviour through verbal abuse, threats, physical violence without of with injury, and occasionally fatalities. The reasons for violence are often complex and factors which have a bearing on the amount of violence shown to staff can include alcohol abuse, abuse of drugs, the availability of offensive weapons, sexual violence, racial violence and problems of mental disorders.
A Danish study on the psychosocial working environment of male nurses showed that 71% of the male nurses had been exposed to violence at work; 85% of male nurses in the acute ward; 81% of male nurses in geronto-psychiatric ward and 75% of male nurses in chronic ward was exposed to violence at work. A Dutch investigation on violence at work, which was carried out in 39 psychiatric hospitals, showed that in a period of 6 months in total 6,777 violent actions took place: 1696 patients and 2,299 workers were involved. Most violent actions took place in the long-stay departments; only a small amount of the violent actions led at once to sickness absence. In Greece violence at work is reported to take place in outpatient units.
The impact of these factors upon the conditions of health are mainly ***stress*** and ***emotional disturbances*** related to the contact with patients' problems. ***Burn-out*** problems are also reported. In Ireland violence to staff was identified as being the cause of 11% of all reported occupational accidents in the Health Care Sector. Moreover, an Irish study showed that 40% of the nurses experiences stress as a result of dealing with difficult demanding or uncooperative patients.

***Suggestions for preventive and control measures*** are made in order to cope with the emotions and violence at work.
In Belgium activities in the field of the work organization are reported and also the reinforcement of the staff in order to cope with mental load. In France the development of expression groups with the assistance of psychologists is proposed. This may be a way of dealing collectively with the mental and psychical work load. In Ireland and the Netherlands it has been proposed to develop a hospital policy to prevent violence at work. Attention should be paid to the registration of all incidents, to discuss tensions between patients and workers, and to pay attention to the subject during training and education. In Ireland a self-defence programme is in operation in the Eastern Health Board to those who may be exposed to assault.
In the United Kingdom recent studies have indicated that much can be done to reduce the risk on violence by a careful design of the physical environment where there is an interface between the employees and the public; by good organization and the provision of adequate information services to clients; by the provision of adequate staffing which is trained to enable them to anticipate when violence is likely to erupt, and by planning ahead so that the effects of any violence can be minimized as soon as the danger signs are recognized.
Preventive measures however can also have a negative effect. To give an example: the introduction of the Patients' Charter in the United Kingdom, which sets out the standard of service which patients can expect from the National Health Service, has occasionally resulted in verbal abuse when the hospital was unable to deliver the standard of service to which the patient felt he was entitled.

**Relations with colleagues**
In 6 countries (B, DK, GER, GR, IRL, NL) relations with colleagues are identified as a main risk factor in the social work environment. The existence of real teamwork appears to be very important, because it allows a satisfactory regulation of problems, tensions, etc. Working together

as a team is often the only way to face a difficult work situation. Despite the fact that in most countries no quantitative data are available upon this matter, the general impression is that situations are quite diverse, linked with the work organization, but also the general type of social relations in the hospitals. A Belgium study showed that 24% of the respondents mentioned that they experience inconveniences as a result of the work carried out by colleagues. In a Dutch study ***difficulties with teamwork*** with other professionals is mentioned as a factor influencing the stress and burn-out process of nurses in psychiatric hospitals. In Greece lack of teamwork is mentioned as a risk factor concerning mainly the health care supportive personnel.
Other risk factors in the relation with colleagues are ***work in isolation***; in Denmark 16% of the workers in the Hospital Sector are exposed to it and in Germany 8%.
Lack of support or lack of feedback from colleagues or other professional is mentioned in Denmark, Greece and the Netherlands. In France a lack of possibility to transmit information is mentioned as a risk factor. Situations in hospitals are diverse; in some cases the periods of simultaneous presence of both shifts are quite important, in other cases they are almost zero.
Sexual harassment as a risk factor is mentioned in Ireland, the Netherlands and the United Kingdom.
Lack of replacement of sick or absent workers is mentioned in Belgium and Greece. In the already mentioned Belgium study 26% of the respondents indicated that the absence of colleagues interferes with their work.
In the United Kingdom some nervousness is apparent in the sector about job security because of the drive for greater efficiency and the suggestion that some jobs might be de-skilled or undertaken by other occupational groups.

There are no quantitative data available concerning the impact these factors have upon the conditions of health, but it is estimated that they may contribute to ***stress*** and the ***burn-out*** process of hospital workers.

The already mentioned introduction of ***new nursing concepts*** can be seen as a way to meet the above mentioned problems. Another preventive measure which is proposed, is to create a possibility of having informal periods shared by teams, such as coffee breaks, to exchange information or just talks. A final suggestion is that sexual harassment policies, procedures and educational programmes need to be given a greater emphasis in a sector with a high proportion of female employees.

**Relations with management**
In 5 countries (B, GER, IRL, NL, UK) relations with management are identified as a main risk factor in the social work environment. The operational management plays an important role in the efficiency of the work organization. Although there are no quantitative data available on the relations with management, the general impression is that the ways of accomplishing the management job are quite diverse. In France it is noticed that many operational managers face difficulties to define clearly their role and function between the medical staff, the administration and the hospital workers being the crossroad of several different logics. In Belgium the formal information structures in hospitals are reported not to function well. Nurses tend to use the informal structures to solve the problems they face and this leads to a good work organization. Greece studies have shown that often distinguished interests exist between hospital staff and hospital administration. An Irish study showed that 47% of the nurses felt there was a lack of consultation and communication between themselves and the management. Irish nurse-managers are not represented at senior decision-making levels in hospitals.
A Dutch study showed that the relations between the management and the Works' Council have improved in the last decade and this leads to more influence of the Works' Council on the strategic decisions. In another Dutch study lack of feedback from the management is mentioned as

a factor influencing the stress and burn-out process of nurses in psychiatric hospitals.
In the United Kingdom the relations with management have become somewhat strained because of the changes in the National Health Services which have resulted in the introduction of professional managers who have been brought in to manage the business and who do not have a professional background or qualification in health care. The managers of the newly created National Health Services Trusts have been trying to put their own stamp on the organization and this has occasionally caused poor relations with the employees.
The main area where conflicts have been evident is in the contracting out of services to private contractors. The wages and conditions offered by private contractors are often less favourable than those currently enjoyed and there is a lack of clarity on the extent to which the Transfer of Undertakings (Protection of Employment) Regulations apply to instances where a new contractor is appointed.

There are no quantitative data available concerning the impact these risk factors have upon the conditions of health, but it is estimated that they may contribute to ***stress*** and the ***burn-out*** process of hospital workers.
A recent study in the United Kingdom indicated that within the nursing profession 93% of the nurses felt stressed at work, 81% felt more stressed than 3 years ago and 73% felt that matters were more serious than one year previous. The main causes of stress were identified as excessive work load, management related problems, lack of resources and changes in the National Health Services and in the profession. The same study mentioned that although it appears that many in the Hospital Service feel that their occupation is stressful, there is a lack of any objective measurement of stress and any parameters that could be applied to suggest what might be an acceptable level. Figures are not available to show how much sickness is due to stress and as a consequence how much time is lost. Hence, objective measurement of stress should be developed in order to get more quantitative data about the extent of the problem.

Training of the management has been proposed as a ***preventive measure*** in order to improve the relations between the management and the workers. Another measure, which is proposed in the French national report, is the further development of the 'conseils de service' which are introduced by hospital law in 1991.
Moreover it has been proposed that in a period of organizational change more attention needs to be given to its effect on the employees. In Ireland, the Ministry of Health is studying a report regarding the position of senior nurse-managers in the general hospital management.

## 3.3 Risk groups

In this section the risk groups will be described. All groups employed in the Hospital Service will be affected to a greater or lesser extent by risk factors in the physical, the organizational and the social work environment. ***Particular groups at risk*** are ***nurses, service and trade workers*** and ***other nursing staff like nurse assistants and apprentices.***

Nurses are identified as a main risk group by 9 countries (B, DK, F, GER, GR, IRL, NL, SP, UK). Nurses are exposed to a wide range of risk factors, but above all to musculo-skeletal loads (strenuous working postures and heavy lifting); deviant working hours (shift work, permanent night work); division of work and job content (jobs demanding high concentration, but also to lack of control over how to perform the work); biological agents (hepatitis B via needle accidents) and chemical agents, especially substances harmful to the skin and substances harmful to the respiratory system. These risk factors are mentioned by 3 or more countries (out of 9).
Risk factors in the social work environment like relations with clients and the public, relations

with colleagues and relations with management, are mentioned by 2 countries as a specific risk factor for nurses.

Service and trade workers are identified as a main risk group by 7 countries (B, DK, F, GR, NL, SP, UK). Like nurses, service and trade workers are exposed to a wide range of risk factors, but mainly to musculo-skeletal loads, chemical agents and biological agents. However, this group may also be affected by risk factors in the organizational environment like division of work and job content, as well as deviant working hours. Within the group of service and trade workers the cleaners are more often mentioned as a group at risk than kitchen workers and technicians.

Nurse assistants and apprentices are identified as a main risk group in 6 countries (B, DK, F, GR, NL, SP). This group is exposed mainly to musculo-skeletal loads, biological agents and chemical substances, but also to ionizing radiation and risk factors in the organizational work environment, like division of work and job content, as well as deviant working hours and risk factors in the social work environment.

Besides the three above mentioned risk groups, two other professional categories are identified as a risk group, that is laboratory workers and anaesthetists. Although these groups represent only a small part of the employees in the sector, they are exposed to specific hazards. Laboratory workers are exposed mainly to biological agents and to chemical agents, especially to substances harmful to the skin and to substances harmful to the respiratory system, but also carcinogenic substances. Division of work and job content is another risk factor to which they are exposed. Anaesthetists are mainly exposed to chemical agents, to reproductive toxicants and neurotoxicants in particular, and it is assumed that this group is also exposed to a high work pressure.

## 3.4 Policies and instruments

This section presents an overview of the policies and instruments aimed at improving the working conditions in the Hospital Sector. Firstly, data on the organization of prevention at hospital level are given, the position regarding policy development is being characterized, and the trends in hospitals' policies will be briefly described. The second subsection deals with the policies and instruments at sectorial level. On this level data are presented on the organization of prevention, and also on the undertaken improvement activities such as action programmes, education, information and research. Like the first subsection, the second one also ends with a characterization of the position regarding the policy development and some national trends in sectoral policies.

It must be emphasized here that the presented data are to some extent difficult to compare, not only because not all countries provided comparable information on each issue, but particularly because data should be interpreted against the background of the national context of occupational Health and Safety policies and instruments. Information on this context, however, would expand both the national reports and this consolidated report too much, and is therefore only occasionally presented here. Hence, conclusions on the policies and instruments in the various countries must be drawn very cautiously.

### *3.4.1 Policies and instruments at hospital level*

In this subsection the organization of prevention on hospital level is described. Hence, data are represented on self-audits on occupational Health and Safety, on Prevention Services, and on Health and Safety Committees or Works' Councils. Table 12 shows whether these prevention

instruments are being applied within hospitals in the various countries. The subsection ends with a characterization of the position regarding the policy development on Health and Safety at hospital level.

*Table 12:* *Organization of prevention in the Hospital Sector at hospital level*

| Country / Organization of prevention | B | DK | F | GER | GR | IRL | NL | P | SP | UK |
|---|---|---|---|---|---|---|---|---|---|---|
| Self-audits on Health and Safety in hospitals[1] | X | X | - | - | - | X | X | - | - | X |
| Prevention Services[1] | X | 0 | - | X | X | X | X | 0 | X | X |
| Health and Safety Committees / Works' Councils | X | X | - | X | X | X | X | - | X | X |

X = instrument is being applied within hospitals to some extent;
0 = instrument is not being applied within hospitals;
- = no data available
1) Due to the implementation of the framework directive 89/391/EEC, it is to be expected that these instruments will be applied in the near future in all EC-countries

**Self-audits on occupational Health and Safety in hospitals**

In general there are no exact figures available to indicate the number of institutions in the Hospital Sector which undertake self-audits on occupational Health and Safety. ***Self-audits are found in 5 countries*** (B, DK, IRL, NL, UK).

In Belgium all organizations who have at least one employee, are obliged to have a Health and Safety service. This Health and Safety service has to make an annual report, an annual action plan and a risk assessment on occupational Health and Safety. So, in theory each hospital should have the disposal of a self-audit, but the extent to which this is actually put into practice is unknown. Denmark points out that the implementation of the EC-directive 89/391/EEC has resulted in the requirement to all hospitals to prepare a written risk-assessment. In Ireland the number of hospitals which undertake self-audits is tending towards 50%. The majority of the hospitals have parent Safety Statements, but many specific Departments have no Safety Statement. In the Netherlands since 1st January 1994 all companies are obliged to have a written risk assessment and evaluation on occupational Health and Safety as a start for their policy. A form of self-audit is therefore obliged, but there are indications that at the moment the majority of the hospitals have no systematic Health & Safety management. In the United Kingdom a new safety audit system called Safecode has recently been developed in a project funded jointly by the National Health Service Management Executive in Scotland and the Health and Personnel Social Security Management Executive of the Health Service in Northern Ireland. Safecode was launched in Scotland in 1993, launches for England and Wales were planned for 1994. The principal components of the Safecode are:

- a comprehensive audit package which measures hospital performances in relation to compliance with pertinent Health and Safety legislation;
- an extensive user-friendly computer database containing over 3,000 references to pertinent Health and Safety legislation, Health and Safety Commission/Executive guidances, National Health Service guidance, British Standards and other relevant guidance; and
- a methodology to assist with the setting of safety priorities.

For France, Germany, Greece, Portugal and Spain there are no data available on this subject. It must be noted here, however, that due to the above mentioned framework directive 89/391/EEC, it is to be ***expected that in the near future risk-assessments will be a common form of self-auditing*** in all companies within all EC-countries, hence also in the Hospital Sector.

**Prevention Services in hospitals**

Within the Hospital Sector ***Prevention Services are found in 7 countries*** (B, GER, GR, IRL, NL, SP, UK). In most of these countries there are ***no exact figures*** available ***to indicate the number of Prevention Services in the sector***.

In Belgium companies with at least 50 employees may establish their own Prevention Service; companies who may not so have to contract a Prevention Service which operates in various companies. The Prevention Services are responsible for the supervision of the working conditions and hygiene of the workers. They have to assess and evaluate risk factors and to suggest improvements.

In Germany the organization of Prevention Services depends on the number of employees and is regulated in accident protection regulations. The work safety stipulates the appointment in companies of experts for work safety and company doctors. Experts for work safety and company doctors have per employee approximately 0.7 to 2 hours a day available, depending on the size of the company.

In Greece in 64% of the hospitals the prevention of occupational risk is dealt with the Committees for the prevention of nosocomial diseases. In 51% of the hospitals the personnel manager deals with Health and Safety. In 12% of the hospitals the medical authorities are in charge of Health and Safety. Only 3 hospitals have an internal occupational Health Services: two private hospitals employing a big number of employees and a public hospital specialized for thorax diseases. In that case the service is limited to tuberculosis prevention.

In Ireland the trend in establishing occupational Health units in hospitals is very slow. The role of the occupational physician is reported to be poorly understood by medical and other staff. Only a few occupational physicians are attached to Health Care institutions.

In the Netherlands the number of hospitals which have established a Prevention Service is unknown. A study showed that approximately 60% of the employees in hospitals receive Prevention Services. Due to the implementation of the directives 89/391/EEC in the Working Environment Act, all companies in the Netherlands will be obliged to contract a certified Prevention Service for a minimum service package (support on risk assessment and evaluation, an on policy on sickness absenteeism, periodical health surveillances and occupational health consulting hours). The Hospital Sector is obliged to have this settled at the 1st of January 1996 at the latest.

A Spanish study under 58 hospitals showed that 55% of the hospitals have Prevention Services inside the hospital and 40% of the hospitals have Prevention Services outside the hospital. Compared to other sectors the number of Prevention Services in hospitals is relatively high in Spain.

In the United Kingdom Prevention Services in the form of safety advisors and occupational health advisors along with established control of infection committees have been available for all National Health Service hospitals. In the private sector the position will be less favourable although the larger private hospitals will have safety advisors and occupational health advisors. It is estimated that over 85% of the employees in hospitals will have the benefit of some form of Prevention Services.

In Portugal the organization of Health and Safety activities at work is established by law, but the complementary legislation that will regulate this is lagging behind. In Denmark the establishment of occupational Health Service is not yet required in the Hospital Sector, except for the kitchen staff. For France there are no data available on this subject.

**Health and Safety Committees or Works' Councils in hospitals**

***Health and Safety Committees or Works' Councils in hospitals are found in 8 countries*** (B, DK, GER, GR, IRL, NL, SP, UK). For France and Portugal there are no data available on this subject.

In Belgium, Denmark, Germany, the Netherlands, Spain and the United Kingdom the establishment of Health and Safety Committees is regulated by law. In Belgium all companies with at least 100 employees have to establish a Works' Council. Companies with at least 50 employees are required to establish a Health and Safety Committee, this means that approximately 450 hospitals have a Health and Safety Committee. Such a Committee consists of representatives of the employer and representatives of the employees as well as Health and Safety experts.

In Denmark it is considered that all hospitals have established a Health and Safety Committee. Such committees consist of representatives of the safety groups established in the hospitals and representatives of the top management. Additionally, the hospitals have established collaboration committees which may discuss subjects related to the organization of the work and the social environment. Coordination between the two types of committees is expected.

In Germany all companies with more than 5 employees have the right to establish Works' Councils. The various issues of in-company Health and Safety organization are coordinated or represented by the Work and Safety Committee. The Works' Council is responsible for the following aspects of Health and Safety: duty to monitor, duty to organize, right of codeterminati-on, duty to assist authorities, right to information and participation.

In Greece in all hospitals Committees are established which are concerned with the prevention of nosocomial infections and hospital hygiene. These Committees also handle problems related to biological risks for the hospital workers.

Irish data show that up to 90% of the hospitals have Safety Committees. These Committees are reported to do not work effectively due to poor resources, poor communication and poor interpersonal relations.

In the Netherlands all companies with more than 35 employees are required to establish a Works' Council. A study showed that 93% of the hospitals with more than 100 employees have indeed a Works' Council established and of the hospitals with less than 100 employees 78% have a Works' Council. Works' Councils are free to establish a Health and Safety Committee. A study showed that 60% of the Works' Councils in the Hospital Sector have established such a committee.

In Spain Health and Safety Committees are mandatory in all companies with more than 100 workers or in companies which are considered dangerous by the Ministry of Labour. A Spanish study under 58 hospitals showed that 62% have a Health and Safety Committee.

In the United Kingdom there is no legal provision requiring the establishment of a Works' Council. However, employers are required to establish a Safety Committee if requested to do so by at least two safety representatives who have been appointed by a recognized trade union. It is considered that Safety Committees will have been established in almost all of the larger hospitals especially those within the public sector. Safety Committees will be found less frequently in nursing homes and hospitals in the private sector, because of their smaller size and lower proportion of union members.

**Characterization of the position regarding policy development and national trends**

An indication of the position regarding ***the policy development on Health and Safety in hospitals*** is obtained from national authors in 8 countries (DK, F, GER, GR, IRL, NL, SP, UK). Belgium and Portugal have not given an indication about their position regarding the policy development on Health and Safety in hospitals.

In Denmark, Germany and the United Kingdom the policy on Health and Safety in hospitals is considered to be ***'well-developed'***. In Denmark, however, it is felt crucial to enhance and strengthen the function and capabilities of the Safety Committees in the hospitals. These organs may be strengthened through the introduction of a more systematical way of working, for instance

by surveys and the preparation of plans for the improvement of the working environment. In Germany not all companies have a well developed policy, this depends on the size of the hospital. In the United Kingdom it is considered that in most hospitals there is a 'well developed' policy on occupational Health and Safety and it is not expected that when individual Hospital Trusts take over the running of hospitals from the Health Authorities there will be any diminution of their commitment to good Health and Safety practice.
In Ireland, the Netherlands and Spain the policies on Health and Safety in hospitals is considered to be ***'partly developed'***. In Ireland further improvements in Health and Safety in hospitals are foreseen. In the Netherlands the development stage depends on the type and size of the institutions. In most hospitals and nursing homes there is no systematic Health and Safety management, while the larger hospitals and academic hospitals have developed a form of safety management. Recently the social partners have made a plan and they intend to start with 'self-activity' projects in order to realize Health and Safety management systems in hospitals, and to gain a deeper understanding in the way how employees themselves can influence their work-related safety, health and well-being.
In France and Greece the policy on Health and Safety in hospitals is considered to be ***in the early stages of development***. In France hospitals are beginning to take into account working condition problems after a long period in which this subject was not considered as very important. Under the pressure of economical constraints and reducing budgets hospital management consider more frequently that improving working conditions may be also a mean to improve efficiency.

It should be emphasized here, however, that ***the given characterization is purely indicative***. First of all, because no standards were provided for the categorization. This means that one country would call a developing stage for example 'partly developed', whereas another country would consider that stage to be 'well-developed'. Furthermore, this characterization is only a global judgement, not accounting for the heterogeneity that is likely to exist between organizations. In the third place, as has been pointed out by one of the national authors, '.... companies may legally be obliged to have a published safety policy, but their quality can be variable, even when the policy on paper is good, it may lack the commitment of the management to fully implement it'.
Nevertheless, from this characterization may be concluded that ***the situation in some countries is ahead of the situation in others, which provides learning possibilities amongst them***.

### *3.4.2 Policies and instruments at sectorial level*

In this subsection data on the organization of prevention on sectorial level are given. An overview of the presence of several sectorial prevention instruments within the various countries is presented in Table 13. Attention is paid to specific directives and regulations on occupational Health and Safety; Health and Safety issues in collective bargaining; Health and Safety inspection and enforcement; insurances and/or compensation arrangements; sectorial Health and Safety Committees and sectorial funds, subsidies, grants or prizes.

Thereafter, undertaken improvement activities such as action projects, training and education activities, research programmes and information structures are presented. Table 14 gives information about the availability of the various improvement activities in the ten EC-countries. This subsection finishes with a characterization of the position regarding the policy development on Health and Safety in the Hospital Sector and some trends therein.

## Sectorial prevention instruments

*Table 13:* *Organization of prevention at sectorial level in the Hospital Sector*

| Country<br>Instruments for prevention | B | DK | F | GER | GR | IRL | NL | P | SP | UK |
|---|---|---|---|---|---|---|---|---|---|---|
| Specific Health and Safety directives/regulations | X | X | X | X | X | X | X | X | X | X |
| Health and Safety agreements in collective bargaining | 0 | X | X | X | X | X | X | - | X | X |
| Health and Safety inspecting and enforcing organizations | X | X | - | X | X | X | X | X | X | X |
| Insurance and/or compensation arrangements | X | X | - | X | X | X | X | X | X | X |
| Sectorial Health and Safety Committees | - | 0 | - | - | - | X | X | - | X | X |
| Funds/subsidies/grants/prizes | - | X | - | - | 0 | X | X | - | X | X[1] |

X = instrument is being applied within the Hospital Sector;
0 = instrument is not being applied within the Hospital Sector;
- = no data available
1) United Kingdom: a competition with prizes was part of the European Year of Health and Safety.

### Specific directives and regulations on Health and Safety

As shown in Table 13 ***all countries have specific directives or regulations on occupational Health and Safety***. These directives have either a sector specific character, or a national character with a significant impact on the sector. The directives or regulations cover a variety of subjects, such as the management of Health and Safety activities, reporting of accidents, injuries, diseases, safe use of chemical substances as ethylene oxide and cytotoxic drugs, biological agents, ionizing radiation, climate, noise, manual handling of loads, personal protective equipment, work equipment.

### Health and Safety agreements in collective bargaining

In most countries collective agreements are made either on national or sectorial level. ***In 8 countries*** (DK, F, GER, GR, IRL, NL, SP, UK) ***specific Health and Safety issues are covered in the collective agreements*** (see Table 13). These Health and Safety issues are for instance working times (DK, GER, NL), social environment (DK, NL), maternity leave for pregnant women (DK), improving the working conditions (F), Safety Agreements (IRL), participation, emancipation, a healthy work climate and disability (NL), occupational Health Service (UK). In Spain, according to an agreement between the government and the unions, it is obliged to consider issues concerning working conditions during the discussion of particular collective bargaining in the civil administration (and thus for the public hospitals).
In none of the countries there is a sector specific organization on Health and Safety issues founded by collective agreements.

**Inspection and enforcement on Health and Safety**

***Most countries have inspecting and enforcing organizations*** (see Table 13: B, DK, GER, GR, IRL, NL, P, SP, UK). In all the countries with inspecting and enforcing organizations, at least one, mostly a governmental, organization is responsible for the inspection and the enforcement of the Health and Safety of the employees at work. In Denmark one inspection organization deals with ionizing radiation. In the Hospital Sector we also find inspection organizations which are responsible for the public health care and hygiene.

Data on inspection and enforcement on Health and Safety are available in 4 countries (DK, GR, IRL, NL). In Denmark in 1993 in total 139 improvement notices and 142 guidance notes are made. The total number of improvement notices and guidance notes in Denmark is considered to be low, which might be caused by the special campaign carried out in the years 1991 - 1993. During this campaign the safety and health committees at hospitals surveyed the work places themselves and thus may have discovered and solved the problems before possible improvement notices and guidance notes were given.

In Greece in total 25 inspections were carried out by the Labour Inspectorate, resulting in 20 agreements on compliance. In Greece the inspections concerning Health and Safety are limited in the hospital sector since the priority of the Ministry of Labour is the industrial sector.

In Ireland the number of inspections is continuously increasing by approximately 25% per year for 10 inspections in 1990 tot 62 inspections in 1994 in an individual approach. In the frame of a sectorial programme 91 inspections were carried out. The main topics in enforcement are Safety Statements, manual handling, violence to staff and disposal of waste.

In the Netherlands in 1993 the number of inspections in the whole Health Care Sector (within the frame of a sectorial programme) is 2,561. These inspections are mainly concentrated on physical and organizational work environment.

**Insurances and compensation arrangements**

As shown in Table 13, ***in 9 countries*** (B, DK, GER, GR, IRL, NL, P, SP, UK) ***there are insurances or compensation arrangements for occupational accidents, occupational diseases, illnesses and disability***. In Germany insurance is obligatory.

In Greece the existing general insurance arrangement is applicable for private clinics and 40% of the public hospitals. For the remaining 60% of the employees of the public hospitals the insurance and compensation are provided by the hospital itself. In that case occupationals accidents and occupational diseases are compensated after trial procedure.

In the Netherlands there are two sector specific arrangements which are agreed upon by collective bargaining, both concerning supplementary payment in case of sickness or disability. In Spain insurance and compensation arrangements for occupational accidents and diseases are covered by a governmental system, which covers accidents and diseases, occupational or not, maternity, old age, death, unemployment and family charges. In the United Kingdom there are special arrangements for employees in National Health Service hospitals.

**Sectorial Health and Safety Committees**

***In 4 countries*** (IRL, NL, SP, UK) ***there are sectorial Health and Safety Committees***. In Ireland the Safety Committee has the function of identifying hazards, assessing and controlling risks. In the Netherlands there are two working groups, one of the Association of Occupational Hygiene and one of a Union. In Spain there are two Committees. In the United Kingdom in the Hospital Sector a Health Service Advisory Committee has been appointed. This Committee has the function of considering and advising the Health and Safety Commission on the protection of people at work from hazard to Health and Safety arising from their occupation within the Health Service as well as on the protection of the public, with the exception of patients undergoing treatment, from related hazards arising from such activities.

**Funds, subsidies, grants and/or prizes on Health and Safety issues**

***Four countries*** (DK, IRL, NL, SP) ***report the existence of funds, subsidies, grants or prices on Health and Safety issues***. The Danish Working Environment Fund provides information, training and research in the field of Health and Safety at work in general. The activities are also relevant for the Hospital Sector. In Ireland in 1994 for the first time a fund has been set aside by the Department of Health for Health and Safety purposes. Hospitals make application for funding and consideration is given by the Department of Health before agreeing.

In the Netherlands there are two sectorial funds for stimulating activities concerning labour market and education. Both funds have also granted project with Health and Safety issues.

In Spain some mutualities and professional organizations award prizes and grants to edit work in safety, hygiene and occupational medicine. In the United Kingdom a competition with prizes sponsored by the industry was run by the Health and Safety Advisory Committee in conjunction with the publication of guidance on the manual handling of loads as part of the European Year of Health and Safety. Competitions of this type however are not a regular feature of health and safety promotion in the hospital service.

## Sectorial improvement activities

*Table 14:* *Sectorial improvement activities on Health and Safety in the Hospital Sector*

| Country / Improvement activities | B | DK | F | GER | GR | IRL | NL | P | SP | UK |
|---|---|---|---|---|---|---|---|---|---|---|
| Action projects | X | X | X | X | X | X | X | - | - | X |
| Training and education: | | | | | | | | | | |
| ▸ Structures and organizations | X | X | 0 | X | X | X | - | X | - | X |
| ▸ Programmes and projects | - | - | - | - | X | X | X | X | - | X |
| ▸ Materials | - | X | X | X | X | X | X | X | X | X |
| Research programmes & projects | X | X | - | X | X | X | X | X | - | X |
| Information structures: | | | | | | | | | | |
| ▸ Databases | - | X | - | X | - | X[1] | X[2] | X | - | X[3] |
| ▸ Sector magazines/periodicals | - | X | - | X | X | X | X | X | X | X |

\- = no data available

X = instrument is being applied within the Hospital Sector;

0 = instrument is not being applied within the Hospital Sector.

1) Ireland: Databases are not specific to hospitals but can be used to access information relevant to the sector

2) Netherlands: Only paper publications are mentioned which are not meant to be a database but they contain a lot of practical and accessible information on applicable solutions for Health and Safety risks.

3) United Kingdom: Databases are not specific to hospitals but can be used to access information relevant to the sector.

**Action projects**

As shown in Table 14 ***action projects on improving the working conditions in the Hospital Sector are carried out in most countries*** (B, DK, F, GER, GR, IRL, NL, UK).

In France, Germany, Greece and the United Kingdom the projects are mainly initiated by the government. In Greece one of the action projects is organized by a private organization. In Denmark and in the Netherlands most of the projects are part of a national strategy to improve

working environment in hospitals on which social partners and government have agreed upon.
In Belgium the projects are developed by the social partners. In Ireland action projects are initiated by the government as well as by the social partners and other organizations.
In the various projects ***a variety of Health and Safety issues are dealt with***, such as:
- physical work load, heavy lifting and/or back complaints (B, F, NL);
- improving work organization and job content (F, GER, NL);
- biological agents and/or chemical substances (DK, GR);
- safety organization and safety management culture (DK, UK);
- working with psychiatric patients and violence at work (B, NL);
- organization of prevention and risk assessment (IRL, NL).

**Training and education activities**
Table 14 shows that ***all countries are active in the field of training and education on Health and Safety***. In some countries (B, GER, P) the training and education activities on Health and Safety are organized by sector specific professional schools. In other countries (DK, UK) these activities are organized by national organizations. In Greece and Ireland the training and education activities are organized by both, thus by sector specific professional schools and by national organizations.
Training and education projects or programmes are mentioned in Greece, Ireland, the Netherlands, Portugal and the United Kingdom. In Greece there is a training project for hospital managers on risk factors and a training project for all hospital staff on protection from chemical, physical and biological factors. There is also an education programme for nurses on occupational hygiene. In Ireland a whole range of training courses is available on issues like risk-control, safety, accident prevention, manual handling, industrial gases and lighting, etc.
In the Netherlands there are training and education projects on handling stress and on handling violence at work. In Portugal six training projects are taking place in various hospitals. In the United Kingdom national vocational qualifications for the health sector are developed by the National Health Service Training Directorate. This organization also has the responsibility to ensure that modules and elements relating to health and safety good practice are incorporated in the standards of occupational competence.

***Training and education material*** is available in Denmark, France, Germany, Greece, Ireland, the Netherlands, Portugal, Spain and the United Kingdom. A great deal of the training material such as books, booklets, videos and leaflets, deals with the physical work environment. Quite some material is available on hazardous substances in general or in particular, like (cytotoxic) drugs, medicines, disinfections, organic solvents, anaesthetics. Other subjects in the physical work environment on which training material is available are physical work load, for instance lifting and carrying of persons and others, ionizing radiation, noise and safety. Some material is dealing with the conditions of health, such as skin diseases, diagnosis and prevention of occupational diseases.
A smaller part of the training material deals with organizational and social work environment on issues like violence at work and threat of violence and the effects of shifts in hospital services on one hand and on issues like stress, mental tiredness and burn out on the other hand.
There is also special training and education material available for certain risk groups like laboratory workers, nurses, workers in operating theatres, kitchen workers, etc.

**Research projects**
Table 14 indicates that ***research projects on Health and Safety in the Hospital Sector are carried out in most countries*** (B, DK, GER, GR, IRL, NL, P and UK), either by national Health and Safety organizations, universities or other research centres. In Denmark the research is part of the action projects in hospitals and in Germany it is part of the national programme Work & Technology, which has a special programme for hospitals.

Research has been carried out on various topics such as impact of new technology, work load, shiftwork, work organization, accidents and accident prevention, working with chemical substances in particular glutaraldehyde, other physical working conditions like radiation and climate. Research has also has been done on stress, sickness absence, and occupational health problems.

**Information structures**

As shown in Table 14 ***information structures on Health and Safety are available in 8 countries*** (DK, GER, GR, IRL, NL, P, SP, UK). All these countries, except Greece, the Netherlands and Spain have computer databases in the sector. Not all databases are however sector specific, but they contain information of relevance to the Hospital Sector. Most general databases contain information on the various Health and Safety issues. There are specific databases on chemicals, the national legislation and guidelines on Health and Safety, accidents and occupational diseases. ***In the above mentioned countries there are also magazines available***. Some magazines are sector specific and targeted to the various professional categories in the Hospital Sector, like doctors and nurses. These magazines occasionally publish articles on Health and Safety issues. Other magazines deal with Health and Safety issues only and they are targeted to Health and Safety experts, members of Safety Committees in all sectors.

## Characterization of the position regarding policy development and national trends

An indication of the position regarding the policy development on Health and Safety at sectorial level in the Hospital Sector is obtained from national authors in 8 countries (DK, F, GER, GR, IRL, NL, SP, UK).

In Denmark, Germany and the United Kingdom the policy on Health and Safety in the Hospital Sector is considered to be ***'well-developed'***. In Denmark it is foreseen that the Hospital Sector will be obliged to establish a occupational Health Service within this century. It is also expected that the employers' and employees' organizations as well as the Sector Safety Council where both organizations are represented, will publish information material and will arrange training programmes. In Germany in the Hospital Sector there is a need for better organizational concepts related to the division of labour between doctors and nursing staff. The sector is looking for models of good practice. In the United Kingdom Health and Safety has been the subject of continuous development for a large number of years. The current emphasis is on ensuring that the management of Health and Safety within the Hospital Sector receives as much attention as the other management problems which are being created by the recent reorganizations in the management structures of the hospitals within the National Health Service and the creation of Self Governing Hospital Trusts. There is a growing realization that good Health and Safety management can be cost effective and the studies on the costs of accidents have clearly shown the savings which can be achieved by managing the health and safety problems in a more coherent way.

In the Netherlands and Spain the policy on Health and Safety in the Hospital Sector is considered to be ***'partly developed'***. Recently, in the Netherlands a sector-strategy on Health and Safety has been developed and this strategy will be implemented in the next four years. Part of this strategy is to start prevention projects in order to get to grips with the causes of work-related risks and to promote the use of workers friendly machines and materials, an optimum workplace and safe and healthy work methods. Emphasis will be put on physical strenuous work, lifting problems, reducing pressure of work and a safe and healthy use of disinfectants, anaesthetic gases and cytotoxic drugs.

In France, Greece and Ireland the policy on Health and Safety in the Hospital Sector is considered to be ***in the early stage of development***. In France especially in the public Hospital Sector the importance of improving working conditions has been recently recognized and the Ministry of Health is developing an active policy on this subject. In the private Hospital Sector this is not yet

the case.
In Greece in the Hospital Sector there was during the period 1989 - 1993 an intensive effort to promote protection from infectious diseases. This effort was based on information and use of individual measures. For the future, eventually, health and safety service will be created in accordance with the EC 89/391 directive. In Ireland further improvements in health and safety are foreseen. Irish Public bodies encourage hospitals to employ safety managers with full responsibility for Health and Safety.
Belgium and Portugal have not given an indication about the position regarding the policy development on Health and Safety in the Hospital Sector. In Belgium it is clear that problems concerning Health and Safety have the attention of the sector. Most of the campaigns and research are in hand of the social partners, sometimes in cooperation with universities and intercompany medical services. However, most of these activities are not coordinated on the sectorial level.

As has been mentioned before with respect to hospitals' policies (see 3.4.1), for the same reasons it must strongly be emphasized that the characterization should only be taken as ***indicative.*** Nevertheless, it is interesting to mention that authors from 7 countries consider the position regarding policy development to be the same at hospital level as at sectorial level, whereas the authors from one country (IRL) feel that the sector's policy development stage is behind to the development stage at hospital level. Furthermore, it may be concluded that also regarding sectorial policy ***the situation in some countries is ahead of the situation in other, again providing learning possibilities among them.***

## 3.5 Discussion and conclusions

In this section preliminary conclusions on the identified main risk factor, health problems and groups at risk will be discussed in relation to the undertaken and proposed actions and policies. The conclusions given in this section are exclusively based on the data as presented in the previous sections of this chapter.

**Main risk factors and related health problems**
The data available in the various European countries on occupational accidents, occupational diseases and risk factors in the Hospital Sector lead to the conclusion that ***7 main risk factors in the work environment*** can be identified. These main risk factors are all mentioned as such by the ***majority*** (more than five countries) ***of the ten European countries*** involved in this study.
The main risk factors in the Hospital Sector and their related health problems are presented in Table 15. It shows three factors which belong to the physical work environment (musculo-skeletal loads, biological agents and chemical substances); two factors in the organization work environment (deviant working hours and division of work and job content); and two factors in the social work environment (relations with clients and the public, and relations with colleagues).
It has to be noticed that 'safety conditions' are not identified here as a main risk factor in the Hospital Sector, as this factor is only mentioned as a main hazard by a minority of the countries (four only). A majority of the countries, however, has mentioned that slippery floors and stairs are one of the main causes for occupational accidents.

*Table 15: Main risk factors and related health problems in the Hospital Sector*

| **Main risk factors** | **Related health problems** |
|---|---|
| Musculo-skeletal loads:<br>- strenuous working postures<br>- strenuous manual handling | musculo-skeletal diseases<br>premature ageing<br>repetitive strain injuries<br>occupational accidents |
| Biological agents:<br>- micro organisms<br>- viruses<br>- contaminated blood | infectious diseases<br>occupational accidents |
| Chemical substances:<br>- harmful to the skin<br>- harmful to the respiratory system | skin diseases<br>allergic respiratory diseases |
| Deviant working hours:<br>- shift patterns<br>- night work | sleeping problems<br>gastro intestinal diseases<br>tiredness<br>back pain<br>stress related problems<br>disruption of the biological rhythms of the exposed |
| Relations with clients and the public:<br>- confrontation with pain and with dying people<br>- violence at work | stress<br>emotional disturbances<br>burn-out |
| Division of work and job content:<br>- lack of autonomy and control<br>- monotonous work (some categories) | stress<br>burn-out |
| Relations with colleagues:<br>- lack of teamwork<br>- work in isolation<br>- lack of support and feedback | no data but likely:<br>stress<br>burn-out |

**Main risk groups**

All workers in the Hospital Sector will be affected to a greater or lesser extent by risk factors in the physical, organizational and social work environment. A majority of the countries has identified three main risk groups. These groups and the main hazards to which they are exposed are presented in Table 16. In addition to this two other professional categories, although representing only a small part of the employees in the Hospital Sector, are identified as a risk group, that is laboratory workers and anaesthetists. It should also be noted that medical doctors have a high incidence of occupational accidents, but they are not identified as a risk group in relation to specific risk factors.

*Table 16:* *Main risk groups and main risk factors in the Hospital Sector*

| Main risk groups | Main risk factors |
|---|---|
| Nurses<br>(11-44% of hospital workers) | musculo-skeletal loads<br>deviant working hours<br>division of work and job content<br>biological agents<br>chemical substances<br>relations with clients and the public |
| Service and trade workers<br>(2-3% of hospital workers) | musculo-skeletal loads<br>chemical substances<br>biological agents<br>division of work and job content<br>deviant working hours |
| Nurse assistants and apprentices<br>(10-27% of hospital workers) | musculo-skeletal loads<br>biological agents<br>chemical substances<br>ionizing radiation<br>division of work and job content<br>deviant working hours<br>relations with clients and the public |

**Actions and policy**

In this paragraph a distinction is made between the undertaken actions with either a technical, organizational or a social character on one hand, and on the other hand the policy in the hospitals itself, at sectorial level and at national level.

* ***Actions***

The following ***technical measures*** are undertaken or proposed in order to cope with the various main risk factors and related health problems:

- ***Musculo-skeletal diseases*** can be decreased by using new techniques and specialized equipment as well as by further ergonomic corrections based on the results of already performed prevention programmes. Another prevention measure is the supply of new designs of uniforms which give female workers a freedom of movement and an ability to achieve the appropriate posture.
- The risk of ***infection diseases*** and the exposure to ***chemical substances*** can be decreased by the use of personal protective equipment, but this should always be the last best preventive measure.
- A careful design of those workplaces where there is an interface between the employees and the public can assist when trying to reduce the influence of ***violence at work***.
- The reduction of the work time to 35 hours a week when working in nighttime.

***Organizational measures*** which are or should be undertaken are:

- In order to decrease ***musculo-skeletal diseases*** the introduction of new techniques and equipment in hospitals should be accompanied with a more global approach. Attention should be paid to the design of work space and equipment, and also the work organization. The work should be organized in such a way that standing work alternates with sitting work, but also that workers

involved in lifting heavy loads have adequate recovery periods and that the other duties which they have to perform do not produce postural stress.

- The risk of ***infectious diseases*** could be reduced by the introduction of general precaution rules, especially procedures for safe working in high risk areas, vaccination of workers, the implementation of a control of infection policy along with requirements to report outbreaks of infections. The use of personal protective equipment and the regular control of exposed workers and biological monitoring should be part of the infection policy.
- In order to decrease the exposure to ***chemical substances*** adequate exposure prevention strategies are performed. Such prevention strategies are focused on finding safer alternatives, forced local and general ventilation, good storage and waste removal, teaching good work practices, appropriate protective devices, epidemiological and individual surveillance of workers. The guidelines on the protection of pregnant workers in order that pregnant workers are removed from certain risk department and high risk areas as well as the guidelines on the safe handling and administration of cytotoxic drugs should be implemented at once in all hospitals in all countries. Another prevention measure which is suggested is to centralize the preparation of carcinogenic drugs if quantities and frequency of use are important.
- Health and other problems related to ***deviant working hours*** could be decreased by composing work schedules in such a way that shift patterns arise which minimize the disruption of the individual and that attention is paid to the number of hours which is needed for recovery. In this respect it has been proposed to develop a new method for designing work schedules for hospital workers in order to provide a healthy balance between work load and recovery in case of abnormal working hours and to make a contribution to the health and well-being of workers.
- It is essential that health problems as a result of ***relations with clients*** are taken seriously. The awareness of issues like stress and violence should be increased and managers should be encouraged to approach these issues as any other hazard in the workplace. However, it might be necessary to develop a special policy to prevent violence at work. In such a policy attention should be given to the registration of all incidents, and to discuss tensions between patients and workers. Attention should also be given to the work organization, for instance planning ahead so that the effect of any violence can be minimized as soon as the danger signs are recognized, and to the provision of adequate information services. Another suggestion is the development of expression groups with the assistance of psychologists in order to cope collectively with the mental and psychical load.
- Problems related to ***division of work and job content*** could be overcome by improving the work organization and the relations between the different occupational categories, especially between medical and non-medical health care personnel. The development of new nursing concepts is proposed, such as integrated nursing leading to sufficient autonomy, contact with patients and a continuous caring, holistic nursing and team nursing leading to a system where all the qualified members of the team are equal and carry out all the nursing tasks.
- Problems resulting from difficulties in the ***relations with colleagues*** can be reduced by creating a possibility of having informal periods shared by the teams to exchange information. Another suggestion is to emphasize sexual harassment policies, procedures and educational programmes in this sector with its high proportion of female employees.

Proposed or undertaken ***social measures***.

- ***Training of the staff*** is essential. Workers in hospitals are trained for instance into safe handling and lifting and a more comprehensive use of mechanical handling devices. Hygiene training programmes are performed in order to prevent infection risks. In these training programmes attention should be given to the use of immunization and the use of personal protective equipment. Staff should be trained in order to cope with mental load, and to deal with violence (e.g. self-defence programmes), with better staffing and better design of workplaces. In the regular vocational training and education programmes more attention should be given to the risk

factors in the sector.

- Also better ***information*** should be given ***about the Health and Safety risks*** at the workplace in the sector: information programmes about the specific risks connected with biological agents and also with reproductive agents so that women can continue their work during pregnancy.

* ***Policy***

***Hospital policy***

In the majority of the European countries (8 countries) hospitals have a ***Health and Safety Committee or a Works' Council***. Hospitals with ***Prevention Services*** and hospitals which undertake ***self-audits*** on occupational Health and Safety are found in respectively 7 and 5 countries. In most countries, however, these are rather new procedures which are not yet available in all the hospitals.

In 3 countries the policy on Health and Safety in hospitals is considered to be ***'well-developed'***, in 3 countries this is considered to be ***'partly developed'*** and in 2 countries the policy on Health and Safety is considered to be in the ***early stage of development***. Two countries have nog given an indication about their position regarding the policy development on Health and Safety in hospitals.

***Sector policy***

In the majority of the European countries (8 countries) there are agreements on ***Health and Safety issues in collective bargaining***. ***Health and Safety Committees*** in the sector itself and ***sectorial funds, subsidies or prizes are found in respectively 4 and 5 countries***.

Again, in the majority of the European countries we find ***action programmes***, ***training programmes***, ***research programmes*** and ***information structures***. In the various improvement activities to a greater of lesser extent attention is paid to the above mentioned main risk factors and related health problems. But, it can not be concluded that in all countries all risk factors are covered by the undertaken improvement activities.

In 3 countries the policy on Health and Safety in the Hospital Sector is considered to be ***'well-developed'***, in 2 countries this is considered to be ***'partly developed'*** and in 3 countries the sector policy on Health and Safety is considered to be in ***the early stage of development***. Two countries have not given an indication about the position regarding the policy development on Health and Safety in the Hospital Sector.

***National policy***

***In all countries*** there are ***specific directives and regulations on occupational Health and Safety***; ***inspecting and enforcing organizations*** are found ***in 9 countries***. The directives and regulations cover subjects as manual handling of loads, biological agents and safe use of chemical substances. However, hazards resulting from deviant working hours, relations with clients and division of work and job content are not completely covered. But here again, the various directives and regulations are not yet implemented in all countries.

In 9 countries there are ***insurance and compensation arrangements*** for occupational accidents, occupational diseases, illnesses and disability.

# 4 View of social partners, government and others

This chapter deals with the view of social partners, government and other organizations, relevant to the sector, on the Health and Safety situation in the Hospital Sector. This information was obtained by interviews with representatives from these parties. In the first subsection an overview is given of their opinions on the major Health and Safety issues in the sector, the policies and solutions they propose accordingly, the trends in the sector they foresee, and their expectations from the European integration. These opinions will be confronted with each other, in order to find both agreements and disagreements between unions, employers' organizations, government and other sector related organizations. In the second subsection, the opinions will be discussed in relation to the findings in chapter 3, which will result in some preliminary discussions.

## 4.1 Overview and comparison of opinions of parties

Interviews with key informants of social partners, government and/or other organizations have taken place in all countries. In Ireland and Portugal interviews have taken place with representatives of government bodies, and both employers' organizations and union organization as well as with representatives of other organizations. In the United Kingdom interviews have taken place with representatives of the government, the employers' organizations and the unions. In Greece interviews haven taken place with representatives of the government, the unions and other organizations. In Belgium and France interviews have taken place with representatives of the unions and other organizations.
In Denmark, Germany, the Netherlands and Spain interviews have taken place with representatives of only one group, either with representatives of the unions (GER, SP), the government (NL), or other organizations (DK).

**Major Health and Safety issues**
In 3 countries (IRL, P, UK) key informants of employers' organizations have given their opinion on the major health and safety issues in the Hospital Sector in their country. Stress/burn-out is mentioned as a major issue in 3 countries (IRL, P, UK). Musculo-skeletal loads, relations with clients and an insufficient Health and Safety management is mentioned as a major issue in two countries (IRL, UK). Among the major issues mentioned in 1 country only, we find chemical substances (UK), biological agents (IRL), deviant working hours (IRL), duration of work (P) and lack of training and education (P).

In 8 countries (B, F, GER, GR, IRL, P, SP, UK) key informants of the unions have given their opinion on the major health and safety issues in the Hospital Sector in their country. Biological agents are mentioned as a major issue in 7 countries (B, GER, GR, IRL, P, SP, UK), chemical substances in 6 countries (GER, GR, IRL, P, SP, UK), mental health problems related to stress and deviant working hours in 4 countries (respectively B, GR, IRL, UK and F, GER, GR, P), musculo-skeletal loads in 3 countries (B, GER, UK), and radiation in 2 countries (GR, SP).
Among the major health and safety issues mentioned in 1 country only, we find relations with clients (UK), insufficient Health and Safety management (IRL) and lack of training and education (IRL). Other health and safety issues are mentioned by key informants of the unions in one country only, but these are not reported here as neither key informants of the other groups have mentioned them.

In 5 countries (GR, IRL, NL, P, UK) key informants of governmental bodies have given their opinions on the major health and safety issues in the Hospital Sector in their country. Musculo-skeletal loads are mentioned as a major issue in 4 countries (GR, IRL, NL, UK), chemical

substances and biological agents in 3 countries (respectively IRL, NL, UK and GR, IRL, NL), deviant working hours, relations with clients, insufficient Health and Safety management and lack of training and education in 2 countries (respectively IRL, NL; NL, P; and P, UK). Among the major health and safety issues mentioned in 1 country only, we find stress/burn-out (GR) and radiation (UK). Other health and safety issues are mentioned by key informants of governmental bodies in one country only, but these are not reported here as neither key informants of the other groups have mentioned them.

In 5 countries (B, DK, GR, IRL, P) key informants of other organizations have given their opinion on the major health and safety issues in the Hospital Sector in their country. Musculo-skeletal loads are mentioned as a major issue in 4 countries (B, DK, GR, IRL). Biological agents are mentioned as a major issue in 3 countries (B, GR, IRL), while relations with clients, lack of training and education and stress are mentioned as such in 2 countries (respectively B, DK; IRL, P; B, GR). Among the major health and safety issues mentioned by 1 country only, we find also chemical substances (GR), deviant working hours (GR), the insufficient organization of prevention (P). Other health and safety issues are mentioned by key informants of other organizations in one country only, but these are not reported here as neither key informants of the other groups have mentioned them.

In Table 17 an overview is given of the top '5' of the major health and safety issues in ten European countries according to key informants of employers' organizations, unions, governmental bodies and other organizations in the Hospital Sector.

*Table 17: Top '5' of the major health and safety issues according to key informants in the Hospital Sector*

| key informants<br>major issues | employers' organizations (3 countries) | unions (8 countries) | government (5 countries) | other organizations (5 countries) | total |
|---|---|---|---|---|---|
| biological agents | 1 | 7 | 3 | 3 | (14) |
| musculo skeletal loads | 2 | 3 | 4 | 4 | (13) |
| chemical substances | 1 | 6 | 3 | 1 | (11) |
| stress/burn-out | 3 | 4 | 1 | 2 | (10) |
| deviant working hours | 1 | 4 | 2 | 1 | (8) |

***Biological agents are mentioned most often as a major health and safety issue***, closely ***followed by musculo-skeletal loads***, and further ***chemical substances*** and ***stress/burn-out***, and subsequently ***deviant working hours.***

Biological agents are mentioned as a major issue by key informants of the unions in 7 countries, by key informants of the governments and other organizations in 3 countries and by key informants of the employers' organization in 1 country. Musculo-skeletal loads are mentioned as a major issue by key informants of the government and other organizations in 4 countries, by key informants of unions in 3 countries and by key informants of employers' organizations in 2 countries. Chemical substances are mentioned as a major issue by key informants of the unions in 6 countries, by key informants of the governments in 3 countries and by key informants of employers' organizations and other organizations in 1 country. Stress/burn-out is mentioned as a major issue by key informants of the unions in 4 countries, by key informants of employers'

organizations in 3 countries, by key informants of other organizations and of the government in respectively 2 and 1 country. Deviant working hours is mentioned as a major issue by key informants of the unions in 4 countries, by key informants of the government in 2 countries and by key informants of employers' organization and other organizations in 1 country.
Other issues with are mentioned by all the four categories are ***relations with clients*** and ***an insufficient Health and Safety Management.***

**Policies and solutions**
In the interviews key informants were asked which policies and solutions they propose in order to address the major hazards in the Hospital Sector in their country. In order to analyse and consolidate them, these proposals have been arranged according to five main topics:
- improvement of aspects in the working environment;
- improvement of company policy;
- improvement of sector policy;
- legislation and enforcement;
- other activities, like education, participation, registration, etc.

In 3 countries (IRL, P, UK) key informants of the employers' organizations have proposed policies and solutions in order to address the major hazards in the Hospital Sector. No proposals are made by this group regarding the improvement of aspects in the working environment.
Proposals for the improvement of the company policy are made in 3 countries (IRL, P, UK).
In Ireland it is suggested to implement Safety Audits on a regular basis, to implement the requirements of Safety Statements for different departments and to employ safety officers and to address the issues raised by Safety Committee. The employers' organization in Portugal has proposed to draft general and internal technical rules on safety, health and work conditions in order to prevent accidents. Furthermore, a person in the staff should be appointed for the ergonomics section. In the United Kingdom action is being taken to ensure that all Trust Hospitals have access to the full range of occupational Health Services including occupational health specialists, occupational hygienists and professional safety advisers. Moreover, some Health Boards require individual hospital Trusts to report to them every six months on the actions they have taken to ensure good standards of occupational Health and Safety.
No proposals are made by this group regarding the improvement of the sector policy.
Proposals on legislation and enforcement are made in 1 country (P), where reinforcement of inspection and supervision has been proposed. Portugal has also proposed other activities such as a professional specific training in safety, health and economical conditions of workers' activities.

In 8 countries (B, F, GER, GR, IRL, P, SP, UK) key informants of the unions have proposed policies and solutions in order to address the major health and safety issues in the Hospital Sector.
Proposals for the improvement of aspects in the working environment are made in 4 countries (B, F, GR, SP). In Belgium a training programme is proposed concerning prevention of back complaints. In France is it proposed that the management should pay more attention to the organization of work and work conditions in general. In Greece proposals are made concerning collective protection of working in laboratories and the use of adequate individual, protective measures. In Spain changes in work organization, especially time patterns, and increasing the size of the hospital staff are proposed. In Spain it is also proposed to place emergency stairs and to create clearly signposted emergency exits.
Proposals for the improvement of company policy are made in 2 countries (B, IRL). In Belgium an example is given of a specific company policy: a hospital started with a transport service consisting of staff members whose only job is to take care of the internal transport of patients. These persons had freely chosen for the job, and had a special training for their job. The introduction of this transport service reduced the stress among the nursing staff, since they no

longer had to do a job that often interfered with their work, which resulted in a decreased work load. In Ireland it is proposed to implement Safety Statement in all hospitals. Moreover Safety Representatives should be accepted and encouraged to carry out their duties.
Proposals for the improvement of sector policy are made in 4 countries (GER, IRL, P, SP). A better communication between the employers and the unions is proposed in Ireland. In Germany it is proposed to establish health promotion campaigns, especially those to prevent back pains, and to carry out health circles. A nation wide campaign in health service is proposed in Portugal. Portugal has also proposed to revise the classification of occupational and risk diseases. Information and vaccination campaigns are proposed in Spain, as well as the estimation of infectious diseases like Aids. In Spain it is also proposed to have specialized institutions for the disinfection of instruments.
Proposals on legislation and enforcement are made in 3 countries (GER, P, SP). In Germany the new regulations of working-time should be modified in such a way that a cumulation of stand-by duties is forbidden. At the same time the number of employees in hospitals should be increased. In Portugal several proposals are made in this field, for instance the regulation and application on Public Service of the Safety, Hygienics and Health Board Law and the obligatory constitution of committees for Hygiene and Safety at Work that will include union representatives. In Spain it is proposed to fulfil the legislation in force.
Proposals for other activities are made in 7 countries (B, F, GER, GR, IRL, P, UK). Most countries (GER, GR, IRL, P, UK) have made proposals on education and training of all staff, safety representatives, etc. on health and safety issues. The improvement of participation either at sectorial level or in the hospitals itself has been proposed in several countries (F, GER, IRL).
In Belgium and Germany suggestions are made to improve the registration of accidents and small injuries. Additional funding is proposed in Ireland and Portugal.

In 5 countries (GR, IRL, NL, P, UK) key informants of governmental bodies have made proposals and suggested solutions in order to address the major hazards in the Hospital Sector.
Proposals for the improvement of aspects in the working environment are made in 1 country (IRL), where it was suggested to improve the amount of lifting equipment in the Health Care Sector, particularly for geriatric wards.
Proposals for the improvement of company policy are made in 3 countries (GR, NL, P). In Greece it has been suggested that organizational measurements should be taken, while in the Netherlands it has been proposed that all hospitals should develop a health and safety policy and that more attention should be paid to preventive measures in hospitals. The set up of occupational Health Services in hospitals together with so-called Infection Commissions is proposed in Portugal.
Proposals for the improvement of sector policy are made in 3 countries (GR, P, UK). In Greece the infrastructure should be improved. In Portugal a clear and socially fair definition of the human resources policy for the sector is needed, while in the United Kingdom a correct culture of safety management in the sector should be created.
Proposals on legislation and enforcement are made in 2 countries (IRL, P). In Ireland there are plans to review the mechanism of fines. Moreover, guidelines on Blood Borne Infections are needed. In Portugal a more effective control is wanted.
Proposals on other activities are made in 4 countries (GR, IRL, NL, P). The introduction or the improvement of education and training programmes is suggested in Greece, Ireland (especially anti-violence training), the Netherlands and Portugal. The improvement of participation is proposed in Greece.

In 6 countries (B, DK, F, GR, IRL, P) key informants of other organizations have proposed policies and solutions to address the major health and safety issues in the Hospital Sector.
Proposals for the improvement of aspects in the working environment are made in 3 countries (B,

DK, F). In Belgium a programme has started in order to decrease the number of back complaints. This programme is directly related to the problems as experienced by the workers. The techniques which are taught to the staff and the aids to be used are in line with the nature of the work in the departments concerned and chosen in consultation with the staff. The aids are only introduced after the staff has learned how to use them. The project is rather intensive but shows success. A negative point is that not all departments can be tackled at the same time. Other improvements which are introduced in Belgium are containers for needles, but this did not really result in a spectacular improvement, and the use of appropriate shoes to avoid slipping and falling, and cleansing agents that clean the floor without making it shiny and slippery. In Belgium in a psychiatric clinic special procedures are introduced in order to minimize physical violence in case of compulsory admission or isolation. In Denmark a more comprehensive plan of action is in discussion. This plan aims at reducing considerably the number of injuries caused by lifting of persons. In France, in order to improve the work organization it has been proposed to consider the work of doctors as any other work and to think about its organization to make easier the work of all other categories.
Proposals for the improvement of company policy are made in 2 countries (F, GR). In France hospitals should use criteria when choosing equipment that should be adapted to the real conditions of use. In Greece the organization of Health and Safety Services in the hospitals has been proposed, as well as the improvement of management regarding working conditions.
Proposals for the improvement of sector policy are made in 2 countries (F, P). In France it is proposed that priority should be given to the design of working places and that the working conditions should be taken into account very soon in the processes of architectural conception. In Portugal plans, projects and programmes including joint procedures of environmental monitoring and health surveillance of workers should be developed, with the purpose of preventing effectively those risks. Moreover, the 'environmental' conditions should be improved in accordance with the principles for promoting safety, hygiene and health at work.
Proposals on legislation and enforcement are made in 1 country (P), where drafting of rules and recommendations for characteristics of installations and health equipment has been proposed mainly as far as protection of workers health is concerned.
Proposals on other activities are made in 5 countries (B, F, GR, IRL, P). Most countries (F, GR, IRL) have proposed training and education of management and personnel on Health and Safety issues, but also on methods to analyze problems and to solve them. In Portugal it has been proposed to set up Committees for the Improvement of Work Conditions with an associated constitution, which will have the power to define the prevention of professional risks policy.
In Belgium it is suggested to improve the first aid registration of all accidents.

In Table 18 an overview is given of the policies and solutions proposed by key informants of employers' organizations, unions, governmental bodies and other organizations in the Hospital Sector. Taking all the opinions from the various parties in the countries together, ***it shows that the proposals from most countries concern other activities***, followed by ***proposals regarding the company policy on Health and Safety*** and ***proposals regarding sector policy on Health and Safety***.

In conclusion and in more detail, the obtained information indicates that across the European countries in which interviews with key informants took place, ***most consensus*** among the four parties exists ***on the need for training and education programmes for all staff and management on Health and Safety issues***. This has been proposed by 13 key informants of all the various parties concerned, in 7 different countries (F, GER, GR, IRL, NL, P, UK).
Improvement of aspects of the work environment in order ***to reduce back complaints*** is proposed by 4 key informants of all the various parties concerned in 3 different countries (B, DK, IRL).
The introduction or ***further development of occupational health and safety services*** in hospitals is

proposed by 3 key informants (of employers' organization, government and other organizations) in 3 countries (GR, P, UK). Health promotion campaigns are proposed by 3 key informants (of unions and other organizations) in two countries (GER, P).
The implementation of Safety Audits, Safety Statements for different departments and the general acceptance of Safety Representatives is proposed in Ireland by key informants of both the employers' organization and the union.
A special topic of interest in Portugal is regulation, reinforcement of inspection, rules and recommendations for installations and health equipment, as far as protection of workers is concerned.

*Table 18:* *'Top 5' of the areas of policies and solutions proposed by key informants to address the main health and safety issues in the Hospital Sector*

| key informants<br>policies & solutions | employers' organizations (3 countries) | unions (7 countries) | government (5 countries) | other organizations (6 countries) | total |
|---|---|---|---|---|---|
| improvement of aspects of working environment | - | 4 | 1 | 3 | (8) |
| improvement of company policy on Health and Safety | 3 | 2 | 3 | 2 | (10) |
| improvement of sector policy on Health and Safety | - | 4 | 3 | 2 | (9) |
| legislation and enforcement | 1 | 3 | 2 | 1 | (7) |
| other activities | 1 | 7 | 4 | 5 | (17) |

**Trends in the Hospital Sector**
In 2 countries (IRL, UK) key informants of employers' organizations have given their opinion on future trends in the Hospital Sector. In Ireland it is foreseen that Health and Safety is slowly becoming an issue in public hospitals and the voluntary hospitals. In the United Kingdom a possible extension of the National Health Service Trust system is foreseen whereby smaller units are created as well as a possible extension of the contracting-out of services which are still undertaken by direct employees of the hospital. Both developments will affect the working conditions in the sector.

In 7 countries (B, F, GER, IRL, P, SP, UK) key informants of the unions have given their opinion on future trends in the Hospital Sector. ***In general the trends which are foreseen is not very positive***. In France for instance it has been signalized that the application of the reduction of working time to 35 hours a week for night work is difficult; it is not evident that hospitals will be able to manage this in a satisfactory way. It is also foreseen that the risk of burn-out is increasing which may lead to a new increase of sickness absenteeism. Workers in hospitals fear more and more that they will not be able to accomplish their mission as they would like to do.
In Germany for the whole sector a worsening of the working conditions is expected, due to cost pressure and shortage of personnel. There is however little hope that the level of employment will increase, because the hospital staff will be paid better in the future. In Spain the implementation of

Health and Safety measures is considered to be of less importance than the unemployment. In the United Kingdom it is expected that the continuing drive for cost reductions in the service is bound to have an effect on the overall health and safety and that the increasing fragmentation of the service will lead to a lack of co-ordination of the safety efforts.
However, also ***some positive developments are foreseen***. In Portugal the implementation of legislation on Health and Safety in the public sector is nearby and as a direct result of this legislation the creation of hygienics and safety committees in the hospitals, the appointment of occupational health doctors and other occupational health and safety professionals, and participation of workers in the enforcement of the legislation in this field is expected. In Spain it is expected that the occupational health law in the future will clarify and state the Health and Safety policies. In the United Kingdom there is hope for a general improvement in health and safety standards in the Hospital Sector thanks to the actions already taken or in progress. In Ireland some improvement is foreseen as far as the problem of payment of working overtime and equal opportunities for women in medicine is concerned. Other future trends however, will mainly depend on the commitment of the Irish government and the resources made available to improve working conditions.

In 5 countries (GR, IRL, NL, P, UK) key informants of the governmental bodies have given their opinion on the future developments in the Hospital Sector.
***Positive trends*** are foreseen in Greece, Ireland, the Netherlands and Portugal. In Greece enforcement of Health and Safety regulations is expected, as well as more education on Health and Safety and the promotion of Health and Safety Services. In Ireland it is noticed that awareness is being heightened in the area of health and safety, but on the other hand more emphasis need to be placed on the writing and implementation of the Safety Statements and the employment of Safety Officers in organizations. In the Netherlands is it expected that workers will become more conscious of health and safety risks and the quality of care. In this respect hospitals have gained already good results with for instance lifting projects: it is good for the nurse and good for the patient. In Portugal the setting up of occupational Health Services in hospitals is foreseen, as well as a stronger sensitizing and information of the workers and the management in hospitals.
On the other side also ***less positive trends*** are to be expected. In the Netherlands a general trend is an increasing ageing population and a development that people will stay for a longer period at home. This will lead to a stronger appeal to home care, while the working conditions for workers in the home care sector are already poor and it will be difficult to improve the work conditions in this special sector. Moreover, due to further financial restrictions the psychical load of workers in hospitals and nursing homes will increase. In the United Kingdom the main trend is towards the creation of smaller management units and a major challenge will be to ensure that in each of these units proper attention is given to health and safety management.

In 4 countries (B, F, GR, IRL) key informants of other organizations have given their opinion on future trends in the Hospital Sector. ***Positive trends*** are foreseen in Belgium, France and Greece. In Belgium a further decrease of the number of back complaints is expected, if constant attention and follow-up will be given. More attention is however needed for other professional categories. In France is it noticed that knowledge about work in hospitals has recently developed, that policies about hygiene, health and safety are now more effective than a few years ago, that data about occupational accidents begin to be reliable and last but not least that contracts for the improvement of working conditions have generated a social dynamic in the hospitals. In Greece it is foreseen that the government will encourage educational programmes on health and safety and the creation of Health and Safety Service in hospitals, especially when this is sufficiently supported by the European Union.
On the other side ***less positive developments*** are to be expected. In France a continuous increase of the work load generating new problems is foreseen, due to the development of new techniques

and the reduction of the average duration of stay in hospitals. In Ireland it is expected that health and safety will only be addressed properly when hospitals managers instigate change, and for instance ensure that Safety Representatives are elected and that consultation takes place.

**Expectations from the European integration**

In 3 countries (IRL, P, UK) key informants of employers' organizations have indicated what they expect from the European integration. In 2 countries (IRL, UK) it is mentioned that the European Directives should produce a uniform standard of Health and Safety throughout the European Union. In this respect doubt has been expressed in one country about the will to ensure that there are uniform standards by which compliance would be judged and a uniform standard of enforcement. Further expectations from the European integration as mentioned by Ireland are de-regulation rather than regulation, finances to implement the expensive programmes, educational directives. The expectations of Portugal concern a harmonious development of the economic sector without damaging the social one. Alertness is needed regarding the problems of health and safety, in order to avoid the incidences in the civil responsibility effectiveness.

In 6 countries (B, GER, GR, IRL, P, UK) key informants of the unions have expressed their expectations from the European integration.

Most countries (GR, IRL, P, UK) expect a positive influence on the Health and Safety in the sector:

- the European Union could contribute by improving the framework for the working conditions of the hospitals especially in the private sector (GR);
- the European integration should bring benefits to employees in the Hospital Sector provided that the employers commit themselves to these issues (IRL);
- the European Union should unfold a discussion in order to force the different countries to implement measures on Health and Safety and the Portuguese Government should promote and follow the measures already defined at communitary level and give an example at his own home through the application of all the enforced national legislation (P);
- it is hoped that the harmonization of legislation and the general process of European integration will lead to a gradual raising of standards within the sector and greater availability of best practices throughout the European Union so that it can be used to raise standards in all member countries (UK). Furthermore it is felt that the present moves by the UK Government towards de-regulation may affect Health and Safety standards in the future and it is expected that the UK membership of the European Union will help to ensure that minimum standards of Health and Safety legislation are maintained and also that the other working conditions will be protected by the Transfer of Undertakings (Protection of Employment) Regulations.

In Germany the expectations from the European integration vary from neutral to light negative. There is fear that positive current standards are deteriorated by the EC and this fear is related to the overall situation in the hospitals and to occupational Health and Safety in hospitals. The existing standards which are partly already high can be decreased by exceptions of the EC once more (as an example is given the working-time regulations for 'doctors in training', which can be increased caused by the intervention of Great Britain, up to 56 hours a week).

In 4 countries (IRL, NL, P, UK) key informants of the government have expressed their expectations from the European integration. In Ireland and Portugal further improvement regarding Health and Safety is expected from the European integration, for instance the improvement of Health and Safety management and a growing awareness that Health and Safety regulations aim at prevention of accidents and ill-health in all workplaces. It is also expected that the implementation of the community guidelines concerning work hygiene, safety and health will change mentalities, sectorial procedures and policies, leading to a better health and safety situation in hospitals.

In the Netherlands and the United Kingdom it was not considered that the European integration would have a major impact on the Hospital Sector. In this respect it is stated that the Netherlands are already in a leading situation on this subject, whereas the United Kingdom reported that the introduction of the Manual Handling Regulations as a result of an EC directive has provided useful focus of attention on a long standing problem in the Hospital Sector.

In 2 countries (F, IRL) key informants of other organizations have indicated what they expect from the European integration. In France the development of a European network is thought to be helpful in transferring knowledge and experience on the subject of working conditions. In Ireland improvement in Health and Safety standards is expected for all staff provided that the directives and regulations are implemented.

## 4.2 Discussion and conclusion

**Risk factors and related health problems**

Chapter 3 (section 3.5) of this report has described the main risk factors and related health problems in the ten European countries as presented in the national reports. When comparing these risk factors with the major Health and Safety issues according to key informants of employers' organizations, unions, governmental bodies and other organizations in the Hospital Sector, it should be noticed that there is a general consensus on at least four risk factors. These risk factors are:

- musculo-skeletal loads;
- biological agents;
- chemical substances;
- deviant working hours.

Key informants of employers' organizations, unions, governmental bodies and other organization in the hospital sector have mentioned 'stress/burn-out' as another major health and safety issue. Stress/burn-out is in our opinion a health problem which is among others related to the three remaining main risk factors as described in chapter 3, namely 'relations with clients and the public', 'division of work and job content'; and 'relations with colleagues'.

**Policies and solutions**

Chapter 3 (section 3.5) of this report has described the policy and undertaken or proposed actions. When comparing these with the policies and solutions as proposed by key informants of employers' organizations, unions, governmental bodies and other organizations in the hospital sector consensus is found on the following items:

- training and education for staff and management on Health and Safety issues;
- improvement of the work environment in order to prevent back complaints and decrease the risk factor musculo-skeletal loads;
- information about Health and Safety risks in the sector and health promotion campaigns;
- implementation of regulations and directives on Health and Safety.

Additional policies and solutions proposed by key informants of employers' organizations, unions, governmental bodies and other organizations are:

- the further development of occupational Health and Safety services in hospitals;
- the improvement of Health and Safety management in hospitals.

Moreover, it should be noticed that priorities differ from country to country. This depends also from the position regarding the policy development and the expected trends in the sector on general developments and the way how these general developments influence the working conditions in the sector in particular.

# 5 Final conclusions

This chapter contains the final conclusions of the study, which are based on all the information presented in the previous chapters. Hence, the information from written information sources, and the opinions of the interviewed key informants are integrated here.
In the first section some general conclusions are presented regarding the methodology of the study, as well as the main social economic characteristics of the Hospital Sector. The second subsection presents the conclusions on the occupational health and safety situation in the sector, summarizing the main risk factors, the related health problems, the main risk groups, and the conclusions on the undertaken actions and policies. Keeping an eye to the future, the last section presents the policy options for further improvements.

## 5.1 General conclusions

**Methodology**
With respect to the methodology of the study, it is firstly concluded that the following main obstacles have been encountered.
- Data on various issues, and particularly quantitative data, were not always available in the various countries, either due to non-existence, or to the restricted time period of the project.
- Related to this, some of the national authors used ways of data gathering and reporting, which differed to the one that was originally set out and that was followed by most authors.
- Cross-national differences exist in definitions and classifications used in reporting and registration systems on occupational accidents, diseases and other health and safety output. Furthermore, explanatory notes on these definitions and classifications were not always obtained.
- The same applies to the circumscription of the sector, e.g. the subsectors which were included, or excluded in the national descriptions of the sector.
- The provided structure for the national descriptions of the sector, the so-called sector profile, did not much account for the existing heterogeneity of the working conditions within the sector, its subsectors, or individual institutions.
- The circumscription of, and the distinction between aspects of the work environment in the sector profile were occasionally unclear, particularly with respect to the organizational and the social work environment.
- The sector profile neither elaborated on the existing national context of occupational health and safety policies and instruments.

Despite these obstacles, and the impediments they presented with respect to the interpretation and cross-national comparison of the data, it is secondly concluded that the methodology of the study has proved to be successful and resulted in a synthetical picture of the occupational health and safety situation in the Hospital Sector. In other words, the aims of the study have fully been met. It also means that, after some necessary adjustments in the sector profile and the procedure for data gathering, this sectorial approach to the improvement of working conditions at European level, may in the future be applied to other sectors as well.

**Social economic context**
Regarding the social economic context of the Hospital Sector, the following conclusions are drawn.
- The Hospital Sector is a quite important economic sector, considering its proportion of the national working population and its proportion of the Gross National Product.
- Most hospitals employ over 100 persons and in most countries the employment in the public sector is clearly dominant, except for Belgium.

- The majority of the hospital workers is female, has an intermediate or low education, and is full-time employed.
- The position on the labour market is fluctuating. Some countries are facing a shortage in nursing personnel, while in other countries there is no demand for qualified personnel.
- The overall economic situation is that the sector experiences economical constraints.
- In all countries the sector is organized by employers' organizations and unions, and in the majority of the countries other organizations are active in the sector as well.
- In spite of a high degree of medical technology the hospital work is labour intensive hand work: personal contact and cure.
- The work process is involved with using a great variety of 'materials' (pharmaceutical and laboratory chemicals, disinfectants, nursing requisites, cleaning materials and food), using several equipment (medical, surgical, laboratory, kitchen, laundry and sterilisation equipment) and tools. The work organization is often characterized as a 'professional bureaucracy'.
- Five main trends are now current in the Hospital Sector, affecting the sector in the ten countries to various extent. These trends are: the steady increase of the expenses, while at the same time hospitals have to reduce their costs due to general economic constraints; the ongoing development in the use of high technology equipment for diagnose and treatment; an increase of the intensive care; the introduction of new management concepts, such as Total Quality Management; the implementation of EC-directives on occupational health and safety issues, of which six in particular are relevant to the Hospital Sector.
- Throughout the ten countries, the Hospital Sector will to some extent be influenced by the European integration, particularly by the specific regulations on occupational health and safety issues. Interviewed key informants from employers' organizations, unions, governmental bodies, and other organizations, mostly consider the European integration to have either positive or negative effects on the Hospital Sector. Some countries hope that the harmonization of legislation will improve the working conditions, while others (especially those countries with high standards regarding work hygiene, safety and health) fear that positive current standards are deteriorated by the EC.

## 5.2 Conclusions on the health and safety situation in the Hospital Sector

Firstly, it is concluded that a fairly broad agreement exists among the ten European countries with respect to the main problem areas which the Hospital Sector has to face, despite the improvement efforts it has undertaken already. From the data available in the ten countries on hazards in the work environment, on occupational accidents and ill-health, together with the opinions of key informants, seven main risk factors can be identified, and five main risk groups. These main risk factors and main risk groups are all identified as such upon literature information in the majority of the ten European countries involved in this study (i.e. more than five countries) and/or are listed in the 'top 5' of main health and safety issues according to key informants.

**Main risk factors and related problems**

Of the seven main risk factors in the Hospital Sector's work environment, three regard hazards in the physical work environment, two factors represent organizational constraints and two factors concern the social work environment. These seven main factors and their related health problems are:

***Musculo-skeletal loads***

Hospital workers are exposed to strenuous working postures such as twisting, bending and kneeling, and also to lifting and (manual) handling heavy weights like patients, and pushing and pulling of heavy objects like beds and transport cards.

Exposure to musculo-skeletal loads seems to be more wide-spread in the hospital sector than in most other sectors of employment.
Related health problems are musculo-skeletal diseases, especially back pain, but also prematurity, repetitive strain injuries. Musculo-skeletal loads are also mentioned as a main cause of occupational accidents.
Risk groups are nurses, service and trade workers, and nurse assistants.

*Biological agents*
Hospital workers have contact with patients and with blood and as a consequence they are exposed to biological agents such as micro-organisms, viruses and contaminated blood. The ways of infection are chiefly accidents involving needle-stick injuries and cuts from sharp objects.
Related health problems are infectious diseases such as hepatitis B, HIV and several other infection diseases. Contact with sharp objects like needles is also considered to be a main cause of occupational accidents.
Risk groups are nurses, service and trade workers, nurse assistants and laboratory workers.

*Chemical substances*
A variety of chemical substances and materials are used in hospitals, such as carcinogenic substances, reproductive and neurotoxicants, substances harmful to the skin and substances harmful to the respiratory system. The widespread exposure to substances harmful to the skin, such as cleaning agents and detergents, and substances harmful to the respiratory system, such as disinfectants, cleaning agents and antibiotics, leads to several occupational diseases.
Related health problems are occupational diseases such as skin diseases and allergic respiratory diseases.
Risk groups are nurses, service and trade workers, nurse assistants, laboratory workers and anaesthetists.

*Deviant working hours*
Hospitals need to provide a continuous service. Therefore, a wide variety of shift patterns is used and an important group of hospital workers is exposed to shift work, either two, three or four shifts, constant night work or bad work schedules.
Related health problems are sleeping problems, gastro intestinal diseases, tiredness, back pain and stress-related problems. Shift work disrupts the biological rhythms of the exposed workers but also their social and family life.
Risk groups are nurses, service and trade workers and nurse assistants.

*Relations with clients and the public*
In the Hospital Sector there is a very close contact between the staff and the clients and the public. Many of the employees experience an insufficient balance between ideals and goals for the patient care on one side and the personal possibilities on the other side.
The relations with the client become more and more difficult on the psychological level, especially the confrontation with pain and dying people, but hospital employees are also confronted with violence at work, ranging from anti-social behaviour through verbal abuse, threats, physical violence with or without injury to occasional fatalities.
Related health problems are stress, emotional disturbances and burn-out.
Risk groups are nurses and nurse assistants.

*Division of work and job content*
In the Hospital Sector there are on one hand workers who are exposed to jobs with high complexity and high concentration, and on the other hand workers suffering from the lack of control over how to perform their work, conflicting work orders or monotonous work.

Related health problems are stress and in some cases burn-out.
Risk groups are nurses, service and trade workers, nurse assistants and laboratory workers.

***Relations with colleagues***
In the Hospital Sector teamwork is very important in order to face the difficult work situation. Lack of teamwork is however a risk factor, as well as work in isolation and lack of support or lack of feedback from colleagues.
There are no quantitative data available concerning the impact these factors have upon the conditions of health, but it is estimated that they may influence the stress and burn-out process of hospitals workers.

Besides the above-mentioned risk factors other hazards such as radiation, relations with management and safety conditions are found but not to such an extent that one can speak of a special problem in the Hospital Sector throughout Europe. In this respect it has to be noticed however, that in the majority of the European countries safety conditions, especially slippery floors and stairs, are considered to be a main cause of occupational accidents.

Furthermore, it is concluded that the overall main health consequences of working in the Hospital Sector regard occupational accidents and six types of disorders: skin diseases, viral hepatitis, infectious diseases, tuberculosis, respiratory diseases and musculo-skeletal disorders.

Looking towards the future, it is concluded that both positive and negative effects on working conditions are expected from the five main trends in the Hospital Sector, including the ones induced by de EC. The negative effects particularly affect the work organization and can be summarized as 'a continuous increase of work load and physical load finally resulting in an increase of burn-out and sickness absenteeism'. The positive effects regard several topics: a general improvement of health and safety standards; the improvement of health and safety policy in hospitals; the creation of Health and Safety Committees; the promotion of health and safety services; and also a decrease of the number of workers suffering from musculo-skeletal diseases, especially back complaints.

**Main risk groups**
It is concluded that all workers in the Hospital Sector will to a greater or lesser extent be exposed to various risk factors in the physical, organizational and social work environment. Particular groups at risk are however:

*Nurses* (11 - 44 % of hospital workers)
Nurses are mainly exposed to musculo-skeletal loads, deviant working hours, division of work and job content, biological agents and chemical substances, especially substances harmful to the skin and substances harmful to the respiratory system.
Nurses are also identified as a main risk group for occupational accidents.

*Service and trade workers* (2 - 30 % of hospital workers)
Service and trade workers are mainly exposed to musculo-skeletal loads, chemical substances and biological agents, but also to a high division of work and insufficient job content and deviant working hours. Service and trade workers are also identified as a main risk group for occupational accidents.
Within this group the cleaners are more often mentioned as a group at risk than kitchen workers and technicians.

*Other nursing staff like nurse assistants and apprentices* (10 - 27 % of hospital workers )
Nurse assistants and apprentices are mainly exposed to musculo-skeletal loads, biological agents and chemical substances, but also to ionizing radiation, a high division of work, insufficient job content, deviant working hours and risk factors in the social work environment.

Two other professional categories, although representing only a small part of the employees in the Hospital Sector, are nevertheless identified as a risk group:

*Laboratory workers*
Laboratory workers are mainly exposed to biological agents and chemical substances, especially to substances harmful to the skin, substances harmful to the respiratory system and carcinogenic substances, but also to division of work and job content.

*Anaesthetists*
Anaesthetists are mainly exposed to chemical substances, in particular to reproductive toxicants and neurotoxicants, but also to high work pressure.

In addition to this, medical doctors have a high incidence of occupational accidents, but they are not identified as a risk group in relation to specific risk factors.

**Actions and policy**
With respect to actions and policies aimed at the improvement of working conditions in the Hospital Sector, it is firstly concluded that in all ten European countries involved in this study, various activities have already been undertaken. Hence, to a varying extent knowledge and experience are already available within the various countries, not only with respect to preventive and control measures on specific aspects of the work environment, but also regarding health and safety policy instruments. A general recommendation is therefore that national and cross-national transfer of this knowledge and experience should be organized and stimulated.

More specifically with respect to the seven main risk factors, it is concluded that the various activities undertaken include all of them. It is striking that the effort is not only put in technical measures, but that also organizational measures which often have a more preventive character, are undertaken.
With respect to the main risk groups it is a concluded that most research and initiatives to reduce risk factors like musculo-skeletal loads are focused on nurses and other nursing staff.

Regarding the hospitals' occupational health and safety policies, it is concluded that Prevention Services and Health and Safety Committees and/or Works Councils and self-audits are found in the majority of the ten countries studied. In most countries, however, these are rather new procedures which are not yet available in all the hospitals, despite the national legal requirements in force. Current developments due to the EC frame work directive (89/391/EEC) will enhance the spreading of risk assessment as a form of self-auditing in hospitals, as well as Prevention Services among hospitals.

A conclusion in the policy instruments for prevention at sectorial level is, that in the majority of the ten European countries in this study there are health and safety agreements in collective bargaining, improvement aimed action projects, training and educational structures and material, research programmes, and (sectorial) magazines on health and safety issues.
Various other specific arrangements on health and safety are however less widespread. These include: sectorial funds, subsidies or prizes; and Health and Safety Committees in the sector.

Regarding policy instruments at national level, which affect the Hospital Sector, it is concluded that health and safety directives and regulations, governmental inspection and enforcing organizations, ill-health and disability insurance and compensation arrangements and databases with health and safety information are common across the ten countries under study.

## 5.3 Policy options for further improvements

From all previous conclusions and from the opinions of key informants, policy options for further improvement have been deduced. In the presentation given hereafter, a distinction is made between the policy options for management in the hospitals, the options for social partners or other organizations at sectorial level, and the options for governments at national level.
It should be emphasized that the policy options are entirely based on the national reports, thus including the opinions of the key informants from employers' organzations, unions, governmental bodies and other organizations relevant to the sector.

**Policy options for management in hospitals**
Considering the identified main risk factors in the Hospital Sector, and the opinions of key informants, hospital management should give priority to four main areas of activities:
- improvement of the physical work environment, and in particular prevention and control of musculo-skeletal loads, biological agents, and chemical substances;
- improvement of the organizational work environment, mainly time patterns and work organization and job content;
- improvement of the social work environment, in particular relations with clients and the public, and relations with colleagues;
- health and safety policy.

The kind of activities that could be undertaken are listed below.

*Physical work environment*
- In order to decrease musculo-skeletal diseases hospitals should not only introduce specialized equipment, but the introduction of new techniques and equipment should be accompanied with an integrated approach. Attention should be paid to the work space, the material conception and the work organization. The work should be organized in such a way that standing work alternates with sitting work, but also that workers involved in lifting heavy loads have adequate recovery periods and that the other duties which they have to perform do not produce postural stress which could increase the possibility of back injury during lifting. Regarding manual handling, hospitals are to get in compliance with the concerned EC-directives (90/269/EEC) as implemented in the national legislation.
- Exposure to biological agents and risks of infection could be avoided or reduced by the introduction of general precaution rules, especially procedures for safe working in high risk areas, vaccination of workers the implementation of infection policy along with requirements to report outbreaks of infections to ensure that these are taken seriously. The use of personal protective equipment and the regular control of exposed workers and biological monitoring should be part of the infection policy. Hospitals should ensure the observance of the EC-directive on biological agents (90/679/EEC) and the one on personal protective devices (89/686/EEC), as they are implemented in the national legislation.
- In order to decrease the exposure to chemical substances adequate exposure prevention strategies are to be performed. Such prevention strategies are focused on finding safer alternatives, forced local and general ventilation, good storage and waste removal, teaching good work practices, appropriate protective devices, epidemiological and individual surveillance of workers. It is also suggested to centralize the preparation of carcinogenic drugs if quantities

and frequency of use are important. Hospitals should ensure the observance of the EC-directive on carcinogenic substances (90/394/EEC), as it is implemented in the national legislation.

*Organizational work environment*
Activities that hospitals could undertake to improve the organizational work environment are the following:
- Health and other problems related to deviant working hours could be decreased by composing work schedules in such a way that shift patterns arise which minimize the disruption of the individual and that attention is paid to the number of hours which is needed for recovery.
- Problems related to division of work and job content could be overcome by improving the work organization and the relations between the different occupational categories, especially between medical and non-medical health care personnel.

*Social work environment*
Policy options for hospitals to improve the social work environment are as follows:
- It is essential that health problems as a result of relations with clients and the public are taken seriously. The awareness of issues like stress and violence should be increased and managers should be encouraged to approach these issues as any other hazard in the workplace. However, it might be necessary to develop a special policy to prevent violence at work. In such a policy attention should be given to the registration of all incidents, and to discuss tensions between patients and workers. In the United Kingdom a careful design of those work places where there is an interface between the employees and the public has proved to be adequate when trying to reduce the influence of violence. Attention should also be given to the work organization, for instance planning ahead so that the effect of any violence can be minimized as soon as the danger signs are recognized, and to the provision of adequate information services. Another suggestion is the development of expression groups with the assistance of psychologists in order to cope collectively with the mental and psychical load.
- The introduction of new nursing concepts can be seen as a way to meet the problems resulting from difficulties in the relations with colleagues. Another preventive measure is the creation of possibilities for having informal periods shared by the teams to exchange information. Moreover, in this sector with its high proportion of female employees, sexual harassment policies, procedures and educational programmes should be emphasized.
- Training of the staff is essential. Workers in hospitals should be trained for instance into safe handling and lifting and a more comprehensive use of manual handling. Hygiene training programmes should be performed in order to prevent infection risks. In these training programmes attention should be given to the use of immunization and the use of personal protective equipment. Staff should be trained in order to cope with mental load, and to deal with violence (e.g. self-defence programmes), with better staffing and better design of work places.
- Better information should be given about the health and safety risks at work: information programmes about the risks connected with biological agents and also with reproductive agents.

*Health and safety policy*
Hospitals could improve their health and safety policy by the following main activities:
- ensure that prevention and control measures are not exclusively directed towards nursing and caretaking staff, but also to other groups like service and trade workers;
- undertaking of risk assessment and self-audits as a well organized routine activity in the various departments;
- establishment and/or encouraging of active Health and Safety Committees, in power to contribute to preventive policies;
- ensuring that all parties involved familiarize with the concepts of health and safety management systems by provision of information, training and tools (see before);

- provision of Prevention Services and epidemiological and individual surveillance of all workers;
- ensure compliance with legislation in force.

**Policy options at sectorial level**

At sectorial level, activities should be initiated to support the improvement activities in the hospitals. Hence, priority should be given to the same four areas previously mentioned under 'policy options for management in hospitals'. However, considering the opinions of key informants, support from decision makers and other influential organizations is most likely to the following priorities:

- improvement of the physical work environment, and in particular prevention and control of musculo-skeletal loads;
- improvement of workers' and management's training and education on health and safety issues;
- improvement of the information about health and safety risks in the sector and health promotion campaigns;
- the stimulation of the further introduction of occupational Health and Safety Services in hospitals;
- the improvement of health and safety management in hospitals.

The activities that could be undertaken are listed below.

***Physical work environment***

Sectorial support to the improvement of the physical work environment in hospitals could consist of the following activities:

- Cross-national evaluation and development of practical information material for hospitals on already existing solutions in the various countries. The evaluation should identify advantages and disadvantages of solutions, not only in terms of physical risk factors, but also in terms of organizational constraints and risk factors. For the development of the information material, knowledge and experience could be used from:
  * a Belgium project where the introduction of specialized equipment is inserted in an integrated approach including work space and material conception and work organization;
  * the French information campaign about precautions against contamination by HIV;
  * the UK guidances notes which give advice on immunization policy, protective clothing, labelling of specimens, handling of sharps, dealing with spillages, disinfection, work procedures, washing facilities and personal hygiene.
  * the current action programme 'A Clean Working Environment by the Year 2005' in Denmark which among others emphasizes the risk of heavy lifting and psychic working environment factors.
- Dissemination of this material to hospitals in all countries in the national languages.
- The stimulation of the introduction of further ergonomic corrections based on the result of already performed prevention programmes.
- The design of new uniforms which give female workers a freedom of movement and an ability to achieve the appropriate postures.

***Organizational work environment***

Sectorial initiatives to improve the organizational work environment in hospitals could be:

- The development of a new method for designing work schedules for hospital workers in order to provide a healthy balance between work load and recovery in case of abnormal working hours and to make a contribution to the health and well-being of workers. Experiences in France and the Netherlands with projects on work scheduling could be useful in this respect.
- The development of new nursing concepts, like integrated nursing leading to sufficient autonomy, contact with patients and a continuous caring, as well as holistic nursing and team

nursing leading to a system where all the nursing tasks are carried out by the qualified team members. Experiences in Belgium, Germany and the Netherlands with new nursing concepts could be of use.

*Training and information*
Sectorial initiatives to improve workers' and management's training and information could consist of the following activities:
- the development of special training programmes, for instance on biological agents and on violence at work;
- the integration of health and safety issues in the regular vocational training and educational programmes in the various countries;
- the organization and stimulation of vaccination programmes;
- the organization of information campaigns about the specific risk factors in the sector.

*Hospitals' health and safety policy*
Sectorial initiatives to stimulate hospitals' self-activity with respect to their health and safety policy could be the following:
- encourage and support hospitals with the creation of permanent commissions superintending the health and safety conditions of the work environment;
- encourage and support hospitals with the implementation of safety audits and safety statements for various departments;
- encourage the implementation of occupational Health and Safety Services in the sector;
- create a national network for information exchange between hospitals, hence sharing problems and solutions on health and safety issues. In several countries such a network exists already on medical subjects.

*Sector policy*
Besides sectorial activities directly aimed to improve health and safety aspects in hospitals, social partners and other sectorial organizations could contribute in other, more indirect ways as well.
- While developing the sector policy, for instance a five year programme, one should take into account:
  * whether or not to establish or intensify the usage of sector specific policy instruments, such as health and safety agreements in collective bargaining, sector specific health and safety organizations, health and safety funds, insurance and compensation arrangements, etcetera.
  * whether, roughly speaking, priority should be given to research and surveys in the sector, to sector-wide actions programmes, or to experimenting and learning-by-doing in demonstration projects in some hospitals, but to the benefit of the whole sector;
  * in integrated approach to working conditions, for instance finding ways to integrate the areas of occupational health and safety, employment, environmental care, quality and efficiency;
  * a good coordination of all sectorial and sector affecting activities.
- Organize cross-national information exchange at a regular basis between social partners, other sectorial organizations, governmental bodies and health and safety experts, in order to:
  * report and perhaps join new initiatives in countries, for example by establishing an electronic Information Center, making use of facilities like Internet, or by publishing a European Hospital Sector News Letter;
  * transfer available knowledge and experiences across the Hospital Sector, for example by organizing seminars and work shops, presenting good practices, experiments, policies and solutions which have proved to be successful in the various countries.

**Policy options at national level**

Policy options at national level concern actions, which could be taken mostly by governments, in three prioritized areas: statistical data on the Hospital Sector's health and safety output, national legislation and enforcement, and European legislation and enforcement. The kind of activities are described below.

*Statistical data*

Considering the deficits in the availability, the quality and the international harmonization of statistical data on the Health and Safety output, governments should take initiatives to realize improvements, in co-operation with the Occupational Associations, the national institutes for statistics, and other organizations involved. Particularly, it regards data on occupational accidents, occupational diseases, morbidity, sickness absenteeism, disability, and mortality.

Improvements could substantially contribute to a sectorial monitoring system, useful for policy making at national and European level. Improvement initiatives should be linked to three now current activities at European level: the Foundation's project 'European Working Environment in Figures', and the projects by DG V and Eurostat on harmonizing the registration of occupational accidents (ESAW-project), and of occupational diseases (EODS-project).

*National legislation and enforcement*

In the field of national legislation and enforcement, governmental bodies could undertake the following activities with respect to the Hospital Sector.

- Ensure a uniform and stronger enforcement within hospitals, of national legislation in force, both with respect to specific risk factors, and with respect to health and safety policy.
- Implementation of the EC-directives in the national legislation, in such a way that harmonization of standards within the Community is realized as much as possible, but on the other hand not lowering current national standards. For the Hospital Sector, this particularly concerns the frame work directive (89/391/EEC), and the directives on personal protective devices (89/696/EEC), on manual handling (90/269/EEC), on carcinogenic substances (90/394/EEC), on biological agents (90/679/EEC), and on woman workers during pregnancy (92/85/EEC).

*European legislation and enforcement*

National governments could undertake the following activities towards European legislations, however taking into account that not all issues can be met by such provisions, and that most of these actions not only affect the Hospital Sector, but other sectors as well.

- Stimulate the realization of EC-directives on workers' participation, for example regarding European Works' Councils, or collective bargaining at European level.
- Encourage the establishment of an effective controlling and enforcing European organization to ensure national compliance with EC-directives.

## *Annex 1 Participating institutes and authors of national reports*

The national reports, or any other more additional information on the Hospital Sector in each country, may be purchased from the following institutes and persons.

- Belgium (B):

Association Nationale Pour la Prévention des Accidents du Travail, ANPAT/NVVA
Rue Gachard 88/Bte. 4
1050 Brussels
Tel: +32 2 648 03 37
Fax: +32 2 648 68 67
Mrs. Karen Peirens, Mr. Marc de Greef

- Denmark (DK):

Danish Working Environment Service
Landskronagade 33-35, 2100 Ø
Copenhagen
Tel: +45 31 18 00 88
Fax: +45 31 18 35 60
Mr. Jens Jensen, Mrs. Charlotte Martin, Mrs. Anette Lerche, Mr. Steen Christensen, Mrs. Ingrid Christensen

- France (F):

ANACT
40-41 Quai Fulchiron
69321 LYON Cedex 05
Tel: +33 72 56 13 13
Fax: +33 78 37 96 90
Mr. Michel Pépin

- Germany (GER):

Federal Institute for Occupational Safety and Health
Friedlich Henkel Weg 1-25
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# WORKING CONDITIONS IN HOSPITALS IN THE EUROPEAN UNION

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A better understanding of what is actually taking place in the work place, of the problems encountered, of the risks faced, of the populations facing these problems and these risks, of the changes taking place and their extent, is necessary for policy makers to set up priorities and action progammes, to identify gaps to legislation, and to measure progress made.

The European sectorial level is an increasingly relevant level for the prevention of occupational risks and the improvement of working conditions. Problems are often quite similar, although health prevention policies and priorities can be somewhat different from one country to the other. Action programmes and research are also carried out simultaneously in various countries and a lot is to be gained by knowing what is done and how things are done elsewhere. Synergies could be developed and possible duplications avoided.

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