Work-related health monitoring in Europe from a public health perspective

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Background: In contrast to the enormous importance of work to the life of humans and societies, the working environment has so far played only a minor role in health monitoring. However, increasingly it is realized that work has a strong public health impact and therefore is also a cost factor to modern societies. The aim of the project WORKHEALTH, which is currently being carried out under the EU health monitoring programme, is the establishment of indicators for work-related health monitoring in Europe from a public health perspective. Working procedure: The work will be carried out by means of three work packages: a synopsis of existing work-related indicator sets together with the identification of areas still to be developed, resulting specification of new indicators for work-related health monitoring, and the development of operational definitions for these indicators. The project includes strong links to the fields of occupational health and safety, public health, social insurance and labour inspectorates to include demands from, as well as to disseminate results to, these different institutions also involved in aspects of work-related health monitoring. Expected results and contributions: Expected results will be indicators for work-related health monitoring that have been developed jointly with the participation of all Member States and different stakeholders within this field, and which permit comparable and reliable data at a national as well as European level.

Keywords: indicators, public health impact, work-related diseases, work-related health monitoring

INTRODUCTION AND OBJECTIVES
Given that most people spend 8 hours a day, 5 days a week, 50 weeks a year at work, and that human-work relations have been intensively studied from a political, economical, sociological, psychological, and medical point of view, working life affairs have so far played only a minor role in health monitoring. However, it is increasingly being realized that work is not only a source of community wealth but can also have negative effects on human and public health, and therefore is a cost factor to modern societies. As an example, with respect to loss of life years, WHO and the World Bank attribute 3% to the factor work.1 Studies by the Nordic Council suggest that working conditions cause about 50% of morbidity, ranging from 4% concerning cancer up to 80% for diseases of the musculo-skeletal system.2 The International Labour Office estimates that work-related diseases and accidents account for economical losses as high as 4% of the world-wide gross domestic product.3 In Germany in 1998 the costs of work-related diseases were estimated to amount to at least 28 billion EURO.4

In recent years health monitoring and benchmarking considerations have been widened to include working conditions as well. Proposals for indicators do exist, mainly focused on occupational diseases and work accidents, but also on work quality. The aim in what follows, is to elaborate on these different perspectives of work-related health monitoring and to introduce working procedures of the project WORKHEALTH, which is currently being carried out under the EU health monitoring programme. WORKHEALTH is devoted to the establishment of indicators for work-related health monitoring in Europe from a public health perspective.

CURRENT APPROACHES AND INDICATORS FOR WORK-RELATED HEALTH MONITORING
In several EU Member States work-related health monitoring schemes do exist. These schemes often operate on a regional or industry-branch level and focus on occupational diseases, work accidents, and on the mere description of working conditions. However, at a national as well as international level, discussions on the standardization of more comprehensive reports have taken place and key indicators have been proposed by several bodies, including the WHO and the EU Commission. These might be taken as examples and are described briefly below.

On behalf of the WHO,5 so called country profiles were published. The background to this work was the aim of improving and standardizing national reports about health at work. The report can be taken as a prototype with regard to the indicators recommended and the structure used. The report distinguishes between indicators for ‘prerequisites of occupational health and safety’, ‘working conditions’ and ‘occupational health and safety outcomes’. The indicator system is based on the...
combination of registered data and data provided by surveys and expert assessment systems. A second example of an indicator set for work-related health monitoring was introduced by the EU Commission. One aim of this approach is – among others – to establish a coherent, broad set of indicators to reinforce the effectiveness and efficiency of policy in moving towards the goal of increasing quality in work. Indicators covering 10 main elements of quality within two broad dimensions (‘Characteristics of the Job Itself’ and ‘The Work and Wider Labour Market Context’) are presented, many of them are available already whereas others still have to be developed.

Numerous further approaches exist, which – due to limited space – cannot be described here. However, these proposals often follow the distinct lines of surveillance and quality of work indications. In contrast, health monitoring from a public health perspective tends to include indicators for policy impact analysis; e.g. the existence and distribution of health promotion programmes.

An important framework for all health monitoring activities in the field of Public Health has been proposed by the ECHI project which is funded by the EU Commission. Among other aspects, it approaches the activities in the field of Public Health has been proposed by the ECHI project which is funded by the EU Commission.7 Among other aspects, it approaches the occupational setting, with outcome indicators such as occupational injuries and occupational diseases. Another section of the framework relevant to work-related health monitoring from a public health perspective is ‘health promotion’ – an area which is usually neglected by occupational health and safety monitoring systems. Most of the proposed indicators are defined as generic indicators, i.e. their actual operational definitions have not yet been attempted. The authors envisage other projects under the health monitoring programme covering specific areas of public health to carry this work out for the respective areas. An attractive feature of the ECHI proposal is the great flexibility, which has been realized by the definition of ‘user-windows’. These are described as subsets from the overall indicator list, each of which should reflect a specific user’s requirement or interest.

**PERSPECTIVES OF WORK-RELATED HEALTH MONITORING**

A comprehensive health monitoring system addressing health at work should fulfil the following requirements:

- It includes indicators to describe different aspects of health at work (e.g. mortality, morbidity, health resources) as well as conditions (e.g. working environment, need and utilisation of health services).
- It includes indicators to describe relevant aspects of structure, process, quality and outcome of the health and safety service systems including costs of work-related diseases.
- It covers different work-related activities on policy level as well as on primary, secondary and tertiary prevention.
- It provides comparable and reliable information, as far as possible, based on data already routinely collected in the Member States.

**Bringing in the public health perspective**

As stated earlier, a number of work-related health monitoring schemes already exist. Originally, they were developed from an occupational health and safety perspective, which focuses on occupational diseases and work accidents. In contrast, health at work is of major public health concern as well. One major concern of the EU Commission’s public health programme is the reduction of health inequalities. Reliable data about differences in employees’ health status between countries as well as within a country are one step towards this aim. Health inequalities should be assessed by breaking down and analysing all relevant statistics by socio-demographic criteria. An integrated intersectional health strategy, as asked for by the Commission, can be realized by linking information for the work setting to other aspects of life such as income, social status, housing conditions and leisure activities. Quality of (working) life will be an important aspect in addition to employees’ health status. By establishing indicators to assess health promotion programmes the opportunity to evaluate the policy impact as well as the (cost) effectiveness of these programmes is provided. Finally, the major burden of diseases (including not only physical but also mental illnesses) and the economic and social costs of ill health are within the scope of public health interest.

**Addressing the ‘work-relatedness’ of diseases**

Whereas there are legal definitions for occupational diseases in member states the term ‘work-related diseases’ is used with very different meanings. On the one hand it exclusively addresses morbidity other than work accidents and occupational diseases. This meaning is used by a WHO group of experts: ‘Work related diseases may be an appropriate term to describe disorders other than and in addition to recognised occupational diseases that occur among working people when the work environment and performance contribute significantly, but in varying magnitude to disease causation’, 8 In contrast, comprehensive definitions of ‘work-related diseases’ are used, for example, in the German work safety law: ‘Work related diseases are health problems totally or partly caused by working conditions (including work accidents and occupational diseases)’. 9 Taking this view, which is inherent in the European Health Report, work-related diseases also comprise all non-occupational diseases to whose aetiology work contributes.10 These different definitions lead to different concepts of health monitoring systems. The most restrictive concept is operated in health reports on occupational disease and work accidents. Indicators have been developed by projects,11,12 These reports confine themselves to diseases that are in a causal relation to work by definition of social insurance and workers compensation funds. The indicators are fairly standardized and used in Member States already. In contrast, employees’ judgement on the work-relatedness of diseases might be considered the broadest concept in analyses. This view is taken to calculate the cost of
work-related diseases. However, it is well known that ill people are more likely to scrutinise their working conditions, so that false positive associations may be inferred. Furthermore, since employees usually cannot relate working conditions to specific diseases, this approach allows only overall health outcomes to be studied.

A frequently used way of addressing work-relatedness is to analyse and visualize health outcomes by occupations (e.g. ISCO codes) or economic branches (e.g. NACE codes). When disease prevalence or frequency is higher in specific jobs or branches this might point to an association between working conditions in these jobs and the health outcome.

Finally, the approach to job-specific analysis of health outcomes may be transferred to workings conditions. Sickness absence or prevalence of muscular pain among employees exposed to heavy work could be compared to those not exposed. The relative risk then gives the strength of the relation of that specific aspect of work and that specific aspect of morbidity.

**WORKING PROCEDURE OF THE HEALTH MONITORING PROJECT ‘WORKHEALTH’**

The project WORKHEALTH within the EU Health Monitoring programme is aimed at the establishment of indicators for work-related health monitoring in Europe from a public health perspective. It will be carried out by means of three work packages.

First, a synopsis of existing work-related indicator sets will be produced followed by the identification of areas still to be developed. These indicator sets usually consist of so-called generic indicators (e.g. physical workplace exposures), which then have to be detailed by operational definitions (e.g. prevalence of exposure to noise). While there are common indicators, these sets differ considerably with respect to the scope and degree of work-relatedness. However, establishing indicators from a public health perspective should make use of existing indicator schemes.

Based on the synopsis, the second step is aimed at the supplementation of new indicators for work-related health monitoring. Considerable efforts will be directed to indicators which allow for the comparison and monitoring of health policies (e.g. effects of work-site health promotion programmes). The work package includes the identification of data needs, which at the same time has to be accompanied by a description of what information is available routinely at national or international level. This step finally allows for identification of data sources and data needs to improve implementation.

The feasibility of work-related health monitoring at the EU level depends not only on the availability but also on the quality of the data. The last work package therefore focuses on the operational definitions of the indicators. By reflecting the availability of data sources at EU and national level, operational definitions consider possible levels of breakdown of indicators with respect to diagnosis of diseases, socio-demographic factors like age and sex, as well as workplace information like job titles and industry branches. These definitions finally allow for assessment of the validity and reliability of indicators and therefore are a prerequisite for the implementation of work-related health monitoring.

In order to link WORKHEALTH to activities in the field of occupational health and safety, public health, social insurance and labour inspectorates, satellite workshops will be held. These workshops will include demands and disseminate results into the scientific community and institutional bodies. Results of these workshops will document the state-of-art with respect to the needs and opportunities of work-related health monitoring.

An important link will be built to the European Network for Workplace Health Promotion (ENWHP). The members of the European Network are institutions involved in occupational safety and health, public health and health initiatives organized in the private sector. Supported by the EU Commission, ENWHP is currently concerned with the establishment of an infrastructure for the dissemination and implementation of workplace health promotion in the member states. WORKHEALTH seeks cooperation with ENWHP for two reasons: a) communicating the benefit of work-related health monitoring as an instrument for surveying and prioritizing to national fora, and b) being able to integrate national fora’s demand for information into the indicator system.

A second link will be to national and international institutions in the field of Health and Safety at Work. In this field, several health monitoring schemes do exist already; they focus mostly on indicators reflecting the traditional domain of occupational health and safety. However, there are new approaches which follow broader concepts and require close co-operation in order to create maximum synergies. Issues to be addressed are similarities and differences in the existing indicator systems, upcoming political fields of high priority, and further key aspects such as psychosocial workload. In this context, cooperation with European organizations such as the European Foundation for the Improvement of Living and Working Conditions and the European Agency for Safety and Health (OSHA) will play an important role.

Another link will be built to the European network of social insurance institutions for health at work (ENSII). This network was inititated by the WHO Regional Office for Europe with the support of the Social Insurance Institution, Finland and BKK Federation, Germany and national social insurance organizations from various European countries. The active participants are organizations from the fields of statutory health, accident and pension insurance. This network is committed to increasing awareness among social insurance institutions of the impact of their policies and strategies on workplace health and to encourage them to support the dissemination of good workplace health practices in enterprises throughout Europe. The co-operation between WORKHEALTH and ENSII is aimed to account for the needs and differences in the existing indicator systems, up-forming political fields of high priority, and further key aspects such as psychosocial workload.
health monitoring when composing the indicator set on the one hand, and to give WORKHEALTH access to the competence and know-how on data availability of the network on the other hand.

Finally, the perspective of labour inspectorates will be linked to WORKHEALTH in order to communicate the WORKHEALTH approach and the integration of the Labour Inspectorates’ demands concerning the indicator set. At the same time the information exchange allows access to the Labour Inspectorates’ competence in the field of health monitoring. Topics will be the relevance of work-related health monitoring to the Labour Inspectorates, structural aspects to characterize the workforce, and upcoming political fields of high priority from the Labour Inspectorates’ point of view.

EXPECTED RESULTS AND CONTRIBUTIONS
The project involves the participation of all Member States and will be conducted jointly in these states and on an EU level. A developed core set of indicators for work-related health monitoring might serve as the smallest common denominator of data, which can be produced and periodically delivered by all states of the EU. An enlarged set of indicators may be built up for a subgroup of countries and then the adjustments necessary in other countries to meet these more informative background indicators will be assessed. Operational indicators for work-related health monitoring will be developed that are currently not available. Furthermore, in order to achieve maximum utilization, specific ‘user windows’ (following the ECHI approach) will be proposed. The main result will be an indicator set for work-related health monitoring from a public health perspective. With respect to results, emphasis is given to communication to institutions also involved in aspects of work-related health monitoring. Final results will also be directed to the general public in order to inform on the meaning of work-related health monitoring as an instrument for improving working conditions and quality of life.

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