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Health and Safety Executive

Developing the management standards approach within the context of common health problems in the workplace

A Delphi Study

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Research Report

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Developing the management standards approach within the context of common health problems in the workplace

A Delphi Study

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The primary objective of the research reported here is to provide evidence, arguments and recommendations in relation to the development of a more unified framework for the Health & Safety Executive's programme on 'Health, Work and Wellbeing'. Essentially, it is to answer the key question 'can the Management Standards approach be used more widely to address the most common health problems at work?' In order to answer this question, a better understanding of the current strengths and weaknesses of the Management Standards approach and its potential had to be developed.

The identified information needs have been addressed using a Delphi methodology, framed by a focussed review of the relevant scientific and professional literatures, to elicit, harvest and explore expert knowledge in this area. The programme of work took six months to complete starting in March 2008 and finishing in September 2008.

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This report outlines the key findings of the Health & Safety Executive Contract Research No. 3859 "Developing the Management Standards Approach within the Context of Common Health Problems in the Workplace: A Delphi Study" carried out by the Institute of Work, Health & Organisations.

The Institute is an international postgraduate research school at the University of Nottingham. It is one of the UK's four Collaborative Centres in Occupational Health of the World Health Organisation, and is a leading contributor to the European Agency for Safety & Health at Work's programme. The Institute specialises in organisational psychology and occupational health, and has particular expertise in risk management for work and organisational factors. Over the last 18 years, the Institute has received substantial funding from the Health & Safety Executive for research into the assessment and management of risks to work-related health, which has substantially informed Health & Safety Executive's policy and guidance in this area. As internationally recognised experts in occupational health, Tom Cox and Amanda Griffiths have led this long-standing programme of work. Maria Karanika-Murray contributes to this team with her expertise in risk assessment, work-related health, and related methodological issues.

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EXECUTIVE SUMMARY

This report outlines the key findings of the Health & Safety Executive Contract Research No. 3859 "Developing the Management Standards Approach within the Context of Common Health Problems in the Workplace: A Delphi Study". The study was carried out by the Institute of Work, Health & Organisations, at the University of Nottingham.

The Management Standards approach was developed by the Health & Safety Executive to reduce the levels of work-related stress experienced by working people in Britain. Employers have a duty of care for their employees and are responsible for conducting suitable and sufficient risk assessments for the relevant hazards and intervening to take appropriate control measures for mitigating any possible stress-related effects on employee safety and health. The approach provides managers with the information, procedures and tools needed to achieve this.

There are theoretical arguments and growing epidemiological and anecdotal evidence to suggest that the risk management approach as expressed in the Management Standards initiative might be of relevance to the management of other common health problems in the workplace. Such arguments provide an opportunity to unify the approaches currently used by the Health & Safety Executive to manage health problems at work, with a potential increase in overall cost effectiveness.

The primary objective of the research reported here is to provide evidence, arguments and recommendations in relation to the development of a more unified framework for the Health & Safety Executive's programme on *"Health, Work and Wellbeing"*. Essentially it is to answer the key question *"can the Management Standards approach be used more widely to address the most common health problems at work?"* In order to answer this question, a better understanding of the current strengths and weaknesses of that approach and its potential had to be developed.

The current proposals address these information needs using a Delphi methodology, framed by a focussed review of the relevant scientific and professional literatures, to elicit, harvest and explore expert knowledge in this area. The programme of work took six months to complete starting in March 2008 and finishing in September 2008.

1. Background

A review of the relevant scientific, policy-related and other grey literatures was conducted in parallel with a Delphi study, in order to explore (i) what is known of the Management Standards approach and its current strengths and weaknesses, (ii) what is known of the most common health problems at work, and, finally, (iii) whether an argument could be made, on the basis of what is known, that the most common health problems at work might be managed through the Management Standards approach?

a. The Management Standards Approach

A simple five-step risk management process provided managers with a set of procedures and the tools needed to achieve a reduction in the reported levels of work-related stress. The process demonstrates good practice in the management of health at work through evidence-based joint problem solving (managers and other employees). The focus of the risk assessment and any subsequent intervention is on psychosocial hazards: the design and management of work, work systems and the organisation.

Various detailed criticisms of the Management Standards approach exist and mainly relate to: clarity of the standards, the psychometric properties of the Indicator Tool, the relationship between the risk Indicator Tool and the Standards, and the adequacy of detail provided for designing interventions.

There is sufficient evidence to justify the development and application of a risk management approach to work-related health and well-being based in joint problem solving.

b. The Most Common Health Problems at Work

Reliable and valid evidence exists which identifies the two most common health problems at work as musculoskeletal disorders (MSDs) and occupational mental ill-health (stress, anxiety and depression). They are the major causes of sickness absence, lost of productivity and being without work. Taken together, these accounted for over 70% of self-reported work-related illnesses, incidence cases and working days lost in 2006-07.

"Musculoskeletal disorders" is an umbrella term covering over 200 conditions (Punnett & Wegman, 2004), which include low back pain, joint injuries and repetitive strain injuries of various sorts. Work-related stress is the "most common mental health problem associated with working people". Mild to moderate common mental health problems, such as depression and anxiety also have a high prevalence rate in both the general as well as the working population.

c. Do the most common health problems at work require separate approaches to their management?

Epidemiological evidence suggests that there are shared risk factors between the most common health problems and that MSDs and work-related stress tend to co-occur. Good evidence exists to show that there is a shared set of causal factors for these main common health problems. These "psychosocial" factors largely relate to aspects of the design and management of work, work systems and work organisations. Psychosocial factors have an independent and significant role in the aetiology of musculoskeletal disorders. Prospective studies suggest that psychological distress can be a cause as well as an outcome of MSDs, and there are studies that demonstrate that interventions targeting psychosocial factors are also associated with reductions in MSDs.

The available evidence regarding a shared causation and co-morbidity supports the possibility of a single (unified) approach to the management of the two main common health problems at work: they share important causal factors and there is some co-morbidity. Two things follow: first, such a unified approach may also be appropriate for other common health problems at work if they also share causal factors and demonstrate co-morbidity, and, second, any such unified approach must be flexible enough to allow for tailoring to particular circumstance. In addition, the physical factors that cause MSDs would still need to be addressed in other ways.

2. The Delphi study: Methodology

Delphi is the method of choice for bringing experts together from diverse backgrounds, and involving them in a constructive debate. The results of such a debate can be used to inform the development of the Management Standards. Here, the Delphi consultation with experts was carried out in two rounds. The results of the first round were fed into a second round which sought to provide more detail and to explore the applicability and impact of the findings. Twenty-four experts in occupational health from the UK and EU participated in each Delphi round.

The design of the questions for the first round of consultation was informed by the literature. Experts were asked about their views of the most common work-related health problems, the Management Standards approach, and whether the Management Standards approach as used for stress, could be used for other common health problems. A series of issues were explored in detail in the second round, relating to the development of a more positive approach, organisational size, specific changes needed, integration of occupational and public health, and resources needed for organisations. The information collected were analyses using thematic analysis.

3. Results

The results of the Delphi study are presented in this section. The study was conducted in two rounds: interviews with a sample of the expert panel, followed by an email exchange with the whole panel. The first round was largely exploratory and the second round sought to expand on the key issues that arose from discussions of the findings of that first round. Throughout the report, "interviewee" refers to a participant in Round 1 of the Delphi study, whereas "respondent" refers to a participant in Round 2 of the Delphi study. A summary of the findings is presented at the end of this section.

a. Delphi Round 1

Common work-related health problems

The expert panel agreed that the most common work-related health problems are (i) musculoskeletal disorders (including back pain, repetitive strain injury, and static workload) and (ii) common mental health problems (including stress and related problems such as depression, anxiety, fatigue, and burnout). Cardiovascular and cardiopulmonary disorders, other chronic health problems, and skin problems were also highlighted as important. It was also stressed that different health problems exist for different types of work and worker populations.

The Management Standards approach

Respondents were asked whether they believed that the Management Standards approach works well overall. The prevailing consensus was that although the Management Standards are a needed, innovative, simple, and practical overall approach to managing work-related stress, organisations experience problems following through and implementing risk reduction interventions. Thus, there is still work to be done in terms of how organisations can implement the Standards and what skills and competencies are required. Overall, a question was evident related to whether the Management Standards work in practice or in principle. The consensus was that the approach works well in principle but less so in practice. Experts also agreed that the Management Standards approach is generally but not always used as the Health & Safety Executive intended.

A number of strengths and weaknesses were identified. The Indicator Tool is straightforward, inexpensive, easy to access, and useful for benchmarking. The overall approach is systematic, provides structure for acting on work-related health, can have indirect effects on other work-related health problems, and can lead to better general management.

However, the Indicator Tool omits a number of important factors that can impact on work-related health, lacks validity, the assessment can be costly, time consuming, prescriptive and difficult to implement. The overall approach requires additional resources and guidance to be implemented, is not adequately supported by practitioner competencies, and is narrowly focused on stress.

A number of ways to improve the current Management Standards were suggested, relating to 6 broad themes: (i) developing the Indicator Tool, (ii) improving the quality of implementation, (iii) investing in capacity-building, (iv) examining the evidence for its effectiveness, (v) change any negative connotations related to "stress" and "risk", and most importantly (vi) adopting a broader approach to the management of work-related health.

Using the Management Standards approach for other common health problems at work

The consensus among the experts was that the Management Standards approach can be applied to other common health problems at work – and this was seen as 'a missed opportunity' – but with caution and the necessary adaptations. For this to be achieved, the necessary skills base should be developed, implementation of the process should be made easier, the evidence base should be re-examined and assessment tools adapted. It was stressed that it would only be appropriate to combine

the assessment of common health problems that have the same causal factors and mechanisms. Improvements of the current Management Standards as outlined above are relevant to any extended version of the approach to common health problems at work.

Using the Management Standards approach in small and micro enterprises

The consensus among experts was that the Management Standards approach should be simplified and made more flexible for use in smaller organisations and different contexts (e.g. sectors). Additional guidance and resources should be developed and provided. The issue of anonymity in reporting the results of the assessment was also highlighted.

Using the Management Standards approach rehabilitation and return to work

The expert panel disagreed on whether the Management Standards approach can be used for rehabilitation and return to work. A first group suggested that the Indicator Tool can be used as a 'resource tool' and a way to assess or monitor adjustment to work. A second group suggested that they should only be used in a limited way, as a starting point, a checklist and a benchmark, but that the Indicator Tool is not valid for use in this context. A third group, was categorical in that the approach is based on the management of work-related health at the organisational and not at the individual level, that the focus is on prevention rather than cure, and that the available benchmarks are not appropriate for use with individuals. Thus, legal questions can arise from the use of the Management Standards approach in this context. This group also stressed that rest practice in rehabilitation and return to work already exists and can be used instead.

b. Delphi Round 2

The expert panel expressed views that a broader approach to the management of work-related health can be developed by focusing on good management, placing emphasis on the benefits for organisations, organisational learning and on promoting healthy organisations, promoting organisations' ownership of the process, strengthening the voice of occupational health and safety professionals, placing emphasis on the positive aspects of work and encouraging a proactive approach. In addition, supplementary assessment tools for positive health outcomes could be developed.

It was difficult to decide on the higher and lower organisational size boundaries for implementing the Management Standards. It was agreed, however, that implementation of the approach is problematic for organisations or departments with fewer than 20 to 50 employees due to difficulty to ensure anonymity and confidentiality.

A number of specific changes were suggested on the Management Standards approach and the Indicator Tool, some of which reflect the comments made in Round 1.

In terms of integrating public and occupational health, suggestions clustered around: developing practitioners' competences, reviewing existing bodies of theory and practice relating to public and occupational health, and broadening the scope of the Management Standards to non-work risk factors and the work-home life interface. The workplace was seen as "a key venue for public health initiatives".

Finally, a range of suggestions were offered in terms of additional resources necessary for organisations, mainly relating to advice, guidance, tools for facilitating implementation, and publicising a more positive view of the Management Standards.

4. Development Needs

Possible future directions were identified, on the basis of the expert panel's views. These relate to overcoming current identified weaknesses of the Management Standards approach, broadening out the approach to other common work-related health problems, and addressing a number of challenges.

Overcoming current weaknesses:

1. Incorporate higher level organisational factors in the assessment model and Indicator Tool
2. Modify risk model to allow for the 'balancing out' of positive and negative drivers of employee health
3. Provide further evidence of the validity and reliability of the Indicator Tool and risk management process
4. Develop a more flexible approach to allow tailoring to specific contexts
5. Address the issue of equivalence in relation to assessment tools and processes
6. Provide a more comprehensive 'toolbox' to support all aspects of the Management Standards approach (particularly the translation of the risk assessment information into interventions and the implementation of those interventions)
7. Clarify the use of the approach in terms of organisational populations *vs* targeted at risk groups
8. Develop the business case providing economic arguments for managing stress and other common health problems through the Management Standards approach
9. Educate and provide more support for both users and experts

Broadening out the approach:

10. Develop a more modular approach to the Management Standards to allow it to address both those work and organisational factors common to different health conditions and those specific to particular conditions

Challenges:

11. Develop a set of competencies for those using the Management Standards approach and some mechanism for 'approving' those competencies
12. Develop more supportive compliance and enforcement regimes for users
13. Develop the approach for use in small and micro organisations
14. Carefully examine the validity of using the Management Standards on an individual basis as in rehabilitation and return to work (including the legal position)
15. Examine the usefulness of the approach for public health issues through workplace action

1. INTRODUCTION

1.1. Background

1.1.1. The Management Standards Approach to Work-Related Stress

The Management Standards approach was developed by the Health & Safety Executive to reduce the levels of work-related stress reported/experienced by working people in Britain (http://www.hse.gov.uk/stress/standards). The overall aim is to bring about a reduction in the number of employees who are absent from work due to stress-related sickness or who cannot perform well at work because of their experience of stress. The Management Standards approach was developed to provide managers with the information, procedures and tools needed to achieve this. It was intended to demonstrate good practice in the management of health at work through evidence-based, joint problem solving (managers and other employees) through the application of a risk management methodology (Cousins *et al.,* 2004; Mackay *et al.*,2004). The report "Reducing risks, protecting people" (2001) sets out the philosophy underpinning Health & Safety Executive's approach to managing risks to work-related health.

The legal starting point for the development of the Management Standards approach to work-related stress, in UK and European law, is that there is a duty of care on organisations as the generators of the risk (Health and Safety at Work etc Act 1974, Management of Health and Safety at Work Regulations 1999, European Framework Directive on Health & Safety 1989). Employers are responsible for conducting suitable and sufficient risk assessments for the relevant hazards and intervening to take appropriate control measures for mitigating any possible stress-related effects on employee safety and health (Health & Safety Executive, 2001). The emphasis in doing so is on primary prevention through the design and management of work, work systems and the organisation, referred to in terms of *psychosocial* or *work and organisational* factors (e.g. Cox, 1993; Cox, Griffiths & Rial-Gonzalez, 2000; Cox, Griffiths & Randall, 2003).

The Management Standards approach has two fundamental aspects: a risk management methodology and an assessment model. The assessment model takes the form of a taxonomy that describes the key psychosocial hazards in terms of six domains or dimensions (Cousins *et al.,* 2004; Mackay *et al.,* 2004). The six hazard dimensions have been translated into a set of standards described in terms of desirable 'states to be achieved' through the risk management process. It has been argued that the standards can provide a benchmark for organisations against which to measure their current performance and to assess subsequent improvements.

The Management Standards approach is a key component of the Health & Safety Executive's 'stress toolbox'. This toolbox is now being expanded to include other work on management competencies and on interventions for dealing with common mental health problems at the individual level. Such inclusions will expand the toolbox in terms of adding secondary and tertiary prevention strategies for ill health to those already existing, through the Management Standards approach, in terms of primary prevention.

At the time of writing, the Management Standards programme is being rolled out nationally in three phases (SiP1 Strategic Implementation Programme 1, SiP2 Healthy Workplace Solutions, and WIP Wider Implementation Programme). A considerable amount of information has been collected so far during this implementation of the stress programme (see, for example, Cox, *et al.*, 2007b; Broughton & Tyers, 2008).

1.1.2. Widening the Application of the Management Standards Approach

One interesting aspect of SiP2 has been the integration of the Management Standards approach to stress with that of the public sector programme on the management of sickness absence. However, this attempt at integration was "done somewhat in haste and the messages, although palatable, are still somewhat rudimentary". This partly reflects an incomplete understanding of the particular relationship between stress and sickness absence but also the under-development of the conceptual models, knowledge and attitudes required to underpin a more integrated and unified approach to 'health and work' as recommended in the Black Report (2008).

There are theoretical arguments and growing epidemiological and anecdotal evidence to suggest that the risk management approach as expressed in the Management Standards initiative might be of relevance to the management of other common health problems in the workplace (the arguments and evidence are discussed later in this report). This may be particularly so for the management of work-related musculoskeletal disorders. If this is so, the Management Standards approach may prove capable of having a more favourable impact on the management of absenteeism (and *presenteeism*) and on the attainment of other key organisational performance indicators. Such arguments provide an opportunity to unify the approaches (conceptual and practical) currently used by the Health & Safety Executive to manage health problems at work, with a potential increase in overall cost effectiveness.

1.1.3. Economic Considerations

The organisational health and safety environment is increasingly influenced by economic considerations with related challenges to traditional concepts and assumptions. Some of these shifts in thinking are being translated into European law. At the organisational level, economic arguments are now playing a far greater role in decision making on health and safety at work than before. As a result, actions on the management of health problems at will need to pay more attention to the business case. This line of argument is consistent with aspects of the Black Report (2008). This requires a better understanding of current organisational thinking in the competitive environment of the global free market. This shift in the reality of workplace health management is occurring worldwide.

Persuading organisations to act couched in terms of compliance with legislation and non-legislative instruments, based solely on the reduction of long-term harm to employees, is likely to be increasingly ineffective in this new economic environment. There is evidence to suggest that, at least in some sectors, organisational thinking is now focussed on what is 'safe enough' (as opposed to the principle of continual improvement), on the 'affordability' of health and safety actions, and on the evaluation of such actions in terms of their impact on the bottom line. A shift in thinking might be moving arguments away from organisations' concern and responsibility for individual health towards a focus on their management of organisational behaviour and towards a focus on individual and organisational performance. Such a shift in thinking may also represent a fundamental move away from organisational 'prevention' of harm to the individual.

1.1.4. Future Developments and Needs

In developing this background narrative, three things have become obvious. The first is that the Health & Safety Executive's approaches to the management of workplace health may need to be better integrated and more coherent, both conceptually and practically. How useful and practical is the Management Standards methodology as a tool for addressing work-related stress? Would it work for all common health issues in the workplace? What are the common challenges to health and its management at work? Would a more unified approach increase cost effectiveness? Particular attention needs to be paid to current and future organisational decision making on workplace health management. Second, there has to be a better understanding of the wider contexts to that approach

both economically and legally. Third, there is a need is to position the development of such thinking in the UK in the wider context of European models and policy development.

The current proposals address these information needs using a Delphi methodology, framed by a focussed review of the relevant scientific and professional literatures, to elicit, harvest and explore expert knowledge in this area.

1.1.5. Policy Context

The immediate policy context for this research is provided by the Health & Safety Executive's *Health and Work Divisional Plan*. The Plan highlights a number of areas for future development:

- A look across existing work streams dealing with stress, musculoskeletal disorders and other common health problems and the management of sickness absence to develop common themes and messages to facilitate a more coherent and unified approach for stakeholders

- The gradual transformation of the work on stress into something much more aligned with the overarching *'Health, Work and Well-Being'* message with emphasis on the 'good jobs' agenda and the well managed, high performing organisation

- Focusing priorities on the wider development of the health management agenda so that, for example, musculoskeletal disorders and stress are seen as its contributors to the overall programme, not its leaders

- Ensuring that the Health & Safety Executive's communication activities reflect these developments

In terms of the Plan, it has been argued that, rather than focussing on minimising psychosocial hazards, these initiatives when brought together should be more positively framed and should seek to improve and maintain employee health, well-being and organisational performance.

1.2. Research Objectives

The primary objective of the research reported here is to provide evidence, arguments and recommendations in relation to the development of a more unified framework for the Health & Safety Executive's programme on "*Health, Work and Wellbeing"*. Essentially it is to answer the key question *"Can the Management Standards approach be used more widely to address the most common health problems at work?"* In order to answer this question, a better understanding of the current strengths and weaknesses of that approach and its potential had to be developed.

This evidence, by which this answer is provided, was based on the harvesting of expert knowledge and opinion through a Delphi study with panellists drawn from both the UK and other countries of the European Union. The interpretation of, and commentary on, the Delphi information was conducted within a framework of "what is already known" derived from a focussed review of the available scientific and professional literatures. The Delphi study was conducted to:

- Improve understanding of current and future thinking on the challenges and approaches to the management of health at work including the current strengths and weakness of the Management Standards methodology as a tool for addressing the most common health issues in the workplace

- Explore the challenges to the development of a unified approach to the most common health problems at work based on the Management Standards methodology

- Understand how the development of a more unified approach to the management of the most common health problems at work can be appropriately positioned in terms of current and future thinking in the context of increasingly competitive, global, free market economics

The programme of work took six months to complete starting in March 2008 and finishing in September 2008.

1.3. Outline of the Report

This report is presented in six sections: the background (section 1), what is known (section 2), the Delphi study (sections 3, 4 and 5), and the discussion (section 6). The first and second sections provide the framework within which the information provided by the Delphi study has been interpreted and commented on. The final section introduces new information to answer the key research question: *"can the Management Standards approach be used more widely to address the main common health problems at work?"*

2. WHAT IS KNOWN ABOUT THE MANAGEMENT STANDARDS APPROACH AND COMMON WORK- RELATED HEALTH PROBLEMS?

The answer to the question which defines this section is provided in three parts: (i) what is known of the Management Standards approach and its current strengths and weaknesses, (ii) what is known of the most common health problems at work, and, finally, (iii) could an argument be made, on the basis of what is known, that the most common health problems at work might be managed through a single (unified) approach as attempted with the Management Standards for work-related stress?

2.1. Review of the Scientific and Grey Literatures

A review of the relevant scientific, policy-related and other grey literatures was conducted in parallel with the Delphi study. The literature review was designed to provide a framework for interpreting and commenting on the Delphi study.

A comprehensive review process was used to identify the published bodies of literature relevant to answering the question. The search was focussed in succeeding iterations of the process, by refining the search terms, until only those English language papers and other publications directly relevant to the question were identified. Those that were agreed to be informative were largely either peer-reviewed papers or authoritative and formally published output from government agencies or similarly established and informed organisations. This output included information published on websites as well as that printed and variously disseminated.

Peer-reviewed journal papers were searched in Web of Knowledge, Google Scholar, and PsycARTICLES. Keywords used in the search (singly or in combination) included occupational health, Health & Safety Executive's Management Standards, common workplace health problems, common health problems at work, occupational health management, challenges, directions, agenda for research, future, musculoskeletal disorders, common mental health problems, risk factors, work, pain, co-morbidity, and systematic review.

In addition to peer-reviewed journal papers, grey literature was also included in the search. Grey literature is an important resource because it provides information which helps setting the scene and putting the topic of interest in context (Weintraub, n.d.). The term "grey literature" is commonly used to refer to non peer-reviewed literature or "any documentary material that is not commercially published" (Mathews, 2004). Instead the usual publishers for this type of material are government agencies, universities, corporations, research centres, associations and societies, and professional organisations. Examples of grey literature include technical reports, government documents, working papers, fact sheets, white papers. Possible ways of locating grey literature can be through searching the grey literature gateways, a number of scientific and general search engines, library catalogues at large scientific institutions, the corporation, institution, or agency that is most likely to provide information relevant to the topic of interest.

For the present study, the search of literature was performed in the following ways:

- Search was performed in NLM Gateway and Google using similar search terms for peer-reviewed journal papers

- Key players' websites were searched, including the Department of Health, Department of Work and Pensions, Health & Safety Executive, Chartered Institute of Personnel and Development, Faculty of Occupational Medicine, The Work Foundation, Investors in People, the Institute for Employment Studies, Working for Health, European Agency for Safety and

Health at Work, European Union Trade Institute, and European Network for Workplace Health Promotion. Most of the relevant information was available in electronic format. Where it was not available, request was sent to corresponding department, institution or professional organisation for hard copies

- The Health & Safety Executive was invited to comment on the reference list identified and to advise if any important literature not yet included. A few new references were added as a result

- The experts who participated in the Delphi study were also asked if there were any significant publications relevant to the topic and majority of the recommended publications were already included

2.2. The Management Standards Approach

A simple five-step risk management process was developed to provide managers with a set of procedures and the tools needed to achieve a reduction in the reported levels of work-related stress. The process was intended to demonstrate good practice in the management of health at work through evidence-based joint problem solving (managers and other employees). By the implementation of the Management Standards approach, or its equivalent, organisations would be deemed to comply with their legal duty. Despite its clear focus on defined work groups and on issues of work design and management, this strategy has been described as "an effective 'population' based approach to tackling workplace stress and promoting individual and organizational health" (Mackay *et al.,* 2004). The emphasis in the approach is on prevention and on organisational control measures (Mackay *et al.*, 2004). Diagram 1 describes the steps to be followed.

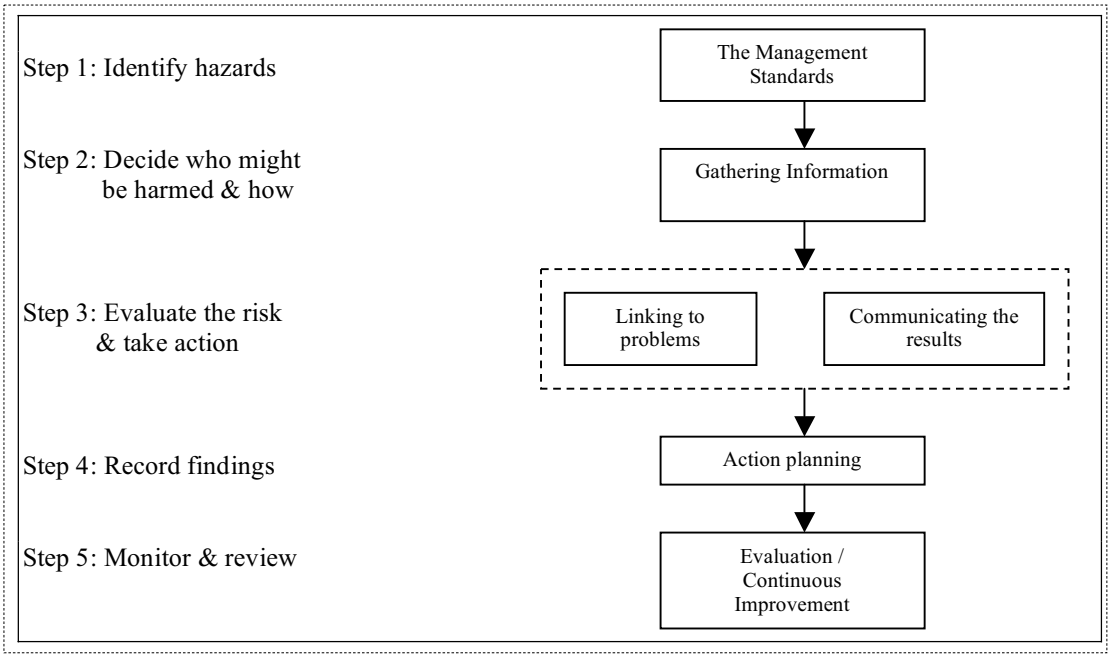

Figure 1: Management Standards Approach: Risk Management

These five steps represent a sequence of risk assessment, the translation of the risk assessment into the planning of control/intervention measures (translation), their implementation, recording and, hopefully, evaluation (Cox, 1993; Cox, Griffiths and Rial-Gonzalez, 2000). The focus of the risk

assessment and any subsequent intervention is on psychosocial hazards: the design and management of work, work systems and the organisation.

2.2.1. The Indicator Tool

While some large organisations had introduced the assessment of psychosocial factors into their risk management procedures by the time the Management Standards approach was introduced (Jordan et al, 2003), the majority of organisations had not. Among the cited reasons for this were a lack of information and support and a lack of suitable procedures and tools for the risk assessment (also see Cox *et al.*, 2007b). The Health & Safety Executive therefore took steps to provide support for organisations wishing to implement the Management Standards approach including the development of an assessment tool and procedure: the Indicator Tool (Cousins *et al.,* 2004). For many, the Indicator Tool became the central and main aspect of the Management Standards approach.

The Indicator Tool offers a means of measurement based on the operationalisation of the Management Standards. It takes the form of a self administered questionnaire that measures employees' responses to six clusters of items. Each cluster represents one of the psychosocial dimensions that together comprise the assessment model. The selection of these dimensions was based on a state-of-the-art review of research on the relationships between work stressors and health commissioned by the Health & Safety Executive (Rick, Thomson, Briner, O'Regan & Daniels, 2002). The work conditions examined in this review were: workload, work scheduling, work design, physical environment, other forms of demand, skill discretion, decision authority, other forms of control, support and bullying or harassment. An early study of employees' responses to the Indicator Tool by Cousins and colleagues (Cousins *et al.,* 2004) provided support for a six factor (domain) model and offered encouragement in relation to the practicality of the Management Standards approach.

Each standard is defined by a series of statements that together describe a desirable set of conditions to work towards *"What should be happening/states to be achieved"*. The aim of the Management Standards approach, overall, is therefore to shift the working population, or particular work groups, towards a more desirable or better state at work.

Of the six dimensions: three reflect job content and three reflect job context (see Appendix 1). This is a traditional distinction in the occupational psychology literature. The three dimensions which reflect job content are identifiable in the Karasek and Theorell (1990) job demands-job control model and in other contemporary theories of work-related stress such as the transactional model of Cox and his colleagues (Cox, 1978; Cox & Mackay, 1981; Cox & Griffiths, 1996): demands, control and support. The job demands-job control model was used as the basis for developing the Management Standards Indicator Tool. The three dimensions that reflect job context have similarly strong theoretical underpinnings largely deriving from the work of the Michigan School of Social Science: roles, relationship and change. The six dimensions have been replicated in systematic reviews on the work-related factors associated with psychological ill-health and sickness absence (e.g. Michie & Williams, 2003). The data collected using the Indicator Tool allow a score to be calculated for each domain, expressed as the mean score for a specific group for each domain (see Health & Safety Executive *n.d.c*).

The Indicator Tool is offered as one way of measuring organisational performance in relation to the management of work-related stress against a set of national standards. Achieving this threshold is considered to indicate that management practices within the organization conform to good practice with regard to preventing the occurrence of work-related stress.

2.3. Strengths and Weaknesses

While there are many studies published in the scientific literature that generally support both the theories underpinning the assessment model adopted by the Management Standards approach and the use of the broader risk management process that frames it, there are few that directly tested the validity and usefulness of the particular methodology. Those that do exist are largely related to the development work carried out in the UK at Nottingham by Cox and colleagues (Cox *et al.,* 2000, 2002; Cox, Griffiths & Randall, 2003) or are associated with similar work carried out in the Netherlands by Kompier and colleagues on a "stepwise approach" to work stress (Kompier, 2006; Kompier, Cooper & Geurts, 2000; Kompier *et al.* 1998; Jansen, Kompier & Taris, 2005). Since the publication of two papers in 2004 by Mackay and colleagues (Mackay *et al.,* 2004; Cousins *et al.,* 2004) along with associated commentaries, most notable by Kompier (2004) and the formal introduction of the Management Standards approach, there has been an accumulation of papers offering critiques of the approach in terms of its scientific base, its applicability and usefulness.

Underlying assumptions: the relationships among exposure to psychosocial hazards, work-related stress and employee health

Several authoritative reviews have been offered over recent years of the relationships among exposure to psychosocial hazards, the experience of stress and effects on employee health (see, for example, Cox, 1993; Cox*,* Griffiths and Rial-Gonzalez*,* 2000). It is clear that there are reliable and often substantive relationships among these groups of variables. However, the nature of the relationships and direction of any causal links is harder to determine for a number of well documented conceptual and methodological reasons (Mackay & Cooper, 1986; Kasl & Cooper, 1987; Cox *et al.,* 2007a; Karanika, 2006). It has been argued that this lack of certainty over causality is important because if the associations are not causal, interventions targeting psychosocial exposures are unlikely to lead to improvements in population health (Macleod & Davey Smith, 2003). However, this argument may not be well founded. Commentators both from a public health (McPherson, 2001) and an organisational perspective (Griffiths, 1999; Cox *et al.,* 2007a) have suggested that the natural science paradigm underpinning this argument may not be the most appropriate for deciding and evaluating interventions in organisations. The absence of "gold standard" data in the *public health* sphere should not be an excuse not to take action (HM Treasury, 2004). Given the complex and changing nature of organisational life, such data may not have been straightforward or even possible to collect. Furthermore, it has been possible to demonstrate significant correlations between the groups of variables that are not artefacts and which can be non-linear as well as linear. Such a situation is consistent with a probabilistic multifactorial multiple outcome model of work-related health. Demonstrating associations may be sufficient for intervention-based joint problem solving and would not produce easily comparable results across organisations. The idea of a simplistic questionnaire tool that can be applied to all members of an organisation - the population approach - therefore is supported by practical considerations (one size must fit all). The jury must, however, remain out as to whether it is the optimal strategy. Using such an approach is not without challenges and issues of "meaning" in relation to the standards across work groups, organisations and sectors immediately arise opening the door to subsequent questions over the reliability and validity and practical usefulness of the Health & Safety Executive's six domain assessment model and the questions of equivalence if other models could and do exist. Several have already been demonstrated, for example by sector (see Griffiths *et al.,* 2006 (engineering sector)).

2.3.1. The risk management approach

While most applied psychologists and health and safety specialists would now accept the validity of using a risk management approach to workplace health issues including those related to stress, some maintain that they are inappropriate. For example, Rick and Briner (2000) have suggested that because of the essentially psychological nature of the stress process and uncertainty about the

relationship between hazard and harm, a risk management approach (as originally developed for physical hazards) may not be appropriate. There is an important point buttressing this conclusion that typifies opposition to the use of a risk management approach. It is the implicit assertion that there is only one form of risk management methodology, once that has been developed for use with physical hazards and which is now being applied, without modification, to psychosocial hazards. In fact there are many variants of risk management, which is essentially a philosophy or framework for workplace action on health and safety, across and within hazard types. However, there are valid criticisms of the variant of risk management developed by the Health & Safety Executive in relation to the Management Standards approach. The main one relates to the context-dependency of risk assessment and risk reduction and the associated demands on the methods used. Most risk management methodologies focus on defined workplaces or systems or workgroups or are equipment or procedure led. This is because the nature of the hazards, and thus the necessary control measures, are defined at this level. They are context dependent and this context dependency distinguishes between a risk-based occupational health approach and a broader population approach. The later may not be appropriate for managing work related health problems and, misapplied, may possibly lead to further health damage to individuals (Adams & White, 2004). The question for the Management Standards approach is "does one size fit all?" or should the assessment model and tool be tailored to the context of the work or work group? Two arguments have been brought to bear with regards the Management Standards approach. First there is evidence to suggest that, at a high level of analysis, the main psychosocial hazards are common across most forms of work regardless of work group, organisational level or sector. Therefore a "high level" model and tool can be applied across all forms of work (and one size can fit all). Second, there is a practical concern that to allow for context dependency would produce a too complex and costly process which would not be easily usable within organisations.

2.3.2. The Management Standards approach

Various detailed criticisms of the Management Standards approach exist and, perhaps, have been most cogently expressed by Kompier (2004). He has highlighted five weaknesses in that particular variant of risk management (at that time). However, none are fatal and his critique can stand largely to guide the further development of the approach. They relate to:

1. **Clarity of the standards**: Kompier (2004) noted that according to Cousins *et al.* (2004), in the initial development workshops, some of the states to be achieved, and therefore the standards themselves, were felt to be very general and too vague. He cites the example of the recurring requirement that "systems are in place for individuals' concerns to be raised and addressed". Such a requirement, Kompier (2004) felt would be difficult to confirm or deny.

2. **The Psychometric Properties of the Indicator Tool**: While Kompier (2004) recognised that the Indicator Tool had high face validity, he felt that its psychometric properties should be have explored in more depth before it was recommended for use. This issue has been subsequently addressed elsewhere (Main, Glozier & Wright, 2005; Edwards, *et al.,* 2008).

3. The **relationship between the risk Indicator Tool and the Standards:** Kompier (2004) reported was not clear enough. Furthermore, he felt that the thresholds imposed on the standards were rather arbitrary and not sufficiently supported by a set of decision rules. It should be noted that the Health & Safety Executive moved away from the idea of thresholds or filters in 2004.

4. **Thresholds**: Whilst Kompier (2004) agreed that "a standard that acts as a yardstick to enable organisations to plot and target progress is likely to be the most effective", he argued that the scientific basis for the threshold was weak. He also suggested that the question of such thresholds was not unique to psychosocial hazards and that decisions should be based on agreement between the social partners (consistent with joint problem solving). This was the

issue on which there was least consensus during the consultation which framed the development of the Management Standards approach.

5. **Designing interventions**: It is not clear from early papers (Cousins *et al.,* 2004 & Mackay *et al.,* 2004) whether the risk assessment and the comparison of its outcomes with the standards and states to be achieved provide sufficient detail for interventions. This has not yet been examined empirically. We do not know whether (and if so, what kind of, and how) interventions have been chosen and implemented by the 22 pilot companies, nor do we know the outcomes of these interventions.

Bond and colleagues (Bond, 2004; Bond & Hayes, 2002; Bond & Bunce, 2000), while recognising the importance of an organisationally formed approach to the management of stress at work, have argued strongly for both the inclusion of individual considerations, such as personality, in such an approach and for it to be complemented by individually focussed interventions. The former approach is well established in the psychology and health literatures (for example see Jex, 1998) while the latter is well established in practice. These criticisms, echoed by others (Murphy, 2003; Tetrick & Quick, 2003) have validity and the Health & Safety Executive's stress toolbox has been expanded to take account of them.

2.4. What are the Most Common Health Problems at Work?

In Britain, 2.2 million workers reported suffering from an illness during 2006-07 that they believed was caused or made worse by their work (Health and safety Executive, 2007). 646,000 of these represented new cases. 30 million working days were lost as a result of work-related ill health, and this accounted for over 80% of the total working days lost in that year. These numbers were significantly higher than those for 2005-06.

These data, and others, clearly show that musculoskeletal disorders and stress grouped with common mental health problems, such as depression or anxiety, are the most commonly reported work-related illnesses. During 2006-07, an estimated 1,144,000 workers suffered from musculoskeletal disorders, followed by 530,000 workers suffering from stress, depression or anxiety (Health & Safety Executive, 2007). These two groups taken together accounted for over 70% of self-reported work-related illnesses, incidence cases and working days lost in 2006-07. Data from other sources seem to generate the same picture. According to the reports from general practitioners, musculoskeletal disorders and mental ill-health accounted for over 70% of diagnoses and days lost (Health & Safety Executive, 2007). Similarly, a survey conducted by the Chartered Institute of Personnel and Development (CIPD) on 819 UK-based organisations showed that musculoskeletal injuries, back pain and stress were dominant among the top five causes of both short-term and long-term absence though mental health problems were more likely to cause long-term rather than short-term absence (Chartered Institute of Personnel and Development, 2007b). Musculoskeletal disorders and stress are also considered by many British employers as the two major ill-health risks facing their workers (Health & Safety Executive, 2007).

2.4.1. Musculoskeletal disorders

"Musculoskeletal disorders" is an umbrella term covering over 200 conditions (Punnett & Wegman, 2004), which include low back pain, joint injuries and repetitive strain injuries of various sorts (Health & Safety Executive, n.d.a). It can describe work and non-work related, specific (for example, rheumatoid arthritis, ankylosing spondylitis), and non-specific problems (for example, back pain, upper limb disorders). The majority of musculoskeletal disorders belong to the latter group, meaning they are hard to diagnose and may occur only periodically (Bevan, Passmore & Mahdon, 2007). Among the various types of non-specific musculoskeletal disorders, back pain is the most common with a lifetime prevalence as high as 60 to 80 percent (Waddell & Burton, 2001; Health &

Safety Executive, n.d.b). It is also the most commonly reported type of work-related ill health compared with other types of musculoskeletal disorders.

In Britain, an estimated 29.9 million days were lost in 2006-07 due to a self-reported illness caused or made worse by work, 10.7 million of which were due to a musculoskeletal problem, with the average sufferer spending 16.7 days annually off work (Health & Safety Executive, 2007). MSDs are reported as one of main reasons for people consulting general practitioner and the third most frequent reason for disability and early retirement (Brenner & Ahern, 2000). It is also estimated that MSDs are costing employers a considerable sum. It has been forecast that incidence and impact of musculoskeletal disorders will intensify and worsen with an ageing workforce, growing obesity, and a reduction in exercise, physical activity and general fitness in the general population (Bevan, Passmore & Mahdon, 2007).

2.4.2. Occupational mental health

Work-related stress is the "most common mental health problem associated with working people" (Cox & Jackson, 2007). Mild to moderate common mental health problems, such as depression and anxiety also have a high prevalence rate in both the general as well as the working population (Hill, *et al.*, 2007; Seymour & Grove, 2005) compared with more severe conditions such as schizophrenia and bipolar disorder. The status of "stress" as a mental health problem, rather than a normal cognitive-emotional state is open to debate. However, whether or not it is a mental health condition in itself, it can be associated with the experience of anxiety and depression (Cox & Jackson, 2007). There is some validity in grouping the three states together.

It is estimated that employers should at any one time expect about 1 in 6 of their workforce to be affected by a mental health condition, though many employers do not understand this prevalence rate, and many underestimate it (The Sainsbury Centre for Mental Health, 2007). Of course, stress, depression and anxiety can be non-worked related (difficult life events, bereavement, relationship breakdown, adjustment to physical ill-health) as well as work-related.

In Britain, stress, anxiety or depression are reported to have caused 13.7 million working days lost in 2006-07 (Health & Safety Executive, 2007), which accounted for more absenteeism than any other work-related illnesses. On average, each case took 30.2 days off annually. Mental ill health may not only causes longer absence but also reduced productivity at work (presenteeism). According to estimates in 2006 (The Sainsbury Centre for Mental Health, 2007), the latter costs the employer 15.1 billion in total, which is almost twice as much as the former and 60% of the total costs associated with mental health problems in the workforce. Moreover, there is evidence to suggest mental ill health is the commonest cause of being without work; nearly 40% of the Incapacity Benefits claimants are suffering from a mental health condition (Department for Work & Pensions, 2006).

2.4.3. Do the most common health problems at work require separate approaches to their management?

The question of whether the most common health problems at work require separate approaches to their management is considered in this section, in relation to the extent to which they share antecedent or risk factors and to the extent to which they demonstrate co-morbidity. This section is not intended as a systematic review, but offers some examples.

Existing epidemiological evidence suggests there are shared risk factors between the most common health problems. Work-related psychosocial factors, such as job demands, job control, social support, which have been consistently and strongly linked to work-related stress, also play a role in the development of musculoskeletal disorders (e.g. Larsson, Sogaard & Rosendal, 2007; Bevan *et al.*, 2007; National Research Council & the Institute of Medicine, 2001; Randall, *et al.*, 2002; Ariens, *et al.,* 2001; van der Windt *et al.,* 2000; U.S. Department of Health & Human Services, Public Health

Service, Centers for Disease Control & Prevention & National Institute for Occupational Safety & Health, 1997). Associations between exposure to psychosocial hazards and the incidence of musculoskeletal disorders remain after physical exposures have been adjusted for. This supports the contention that psychosocial factors have an independent role in the aetiology of musculoskeletal disorders (Ariens *et al.,* 2001; U.S. Department of Health & Human Services, Public Health Service, Centers for Disease Control & Prevention & National Institute for Occupational Safety & Health, 1997). A review conducted by Waddell and Burton (2006) demonstrated that the effect size of physical risk factors alone is only modest.

At least two mechanisms have been proposed to account for the effects of psychosocial factors on musculoskeletal disorders. First, a *biomechanical* pathway, where work organisation may be closely related to physical load (e.g. monotony is associated with repetitive movements). A second proposed pathway is *stress-related*, where work characteristics that are conceptually distant from physical load (such as relationships with management, social support or flexible working hours) impact through psycho-physiological mechanisms such as increased tension, increased sensitivity to pain, likelihood of reporting pain, and so on. Busy and stressed workers engage in risk behaviours such as overwork, rushing, or not adjusting equipment properly, which increase the risks of developing musculoskeletal problems. These possible explanations for the associations between work-related psychosocial factors, mental health and musculoskeletal disorders have been examined by many researchers (e.g. Randall, *et al.,*2002; Bongers, *et al.,* 1993; Ursin, Endresen & Ursin, 1988; Bergqvist, 1984; Parkes, Carnell & Farmer, 2005; U.S. Department of Health & Human Services, Public Health Service, Centers for Disease Control & Prevention, & National Institute for Occupational Safety & Health, 1997).

Co-morbidity is well-documented. Numerous studies exploring the prevalence of pain (a common symptom or complaint of all types of musculoskeletal disorders) among people with common mental health problems or vice versa demonstrates that the two conditions tend to co-occur (e.g. Demyttenaere *et al.,* 2008; Currie & Wang, 2004; Demyttenaere *et al.,* 2006; Dersh *et al.*, 2002). In a large community based sample from six European countries, Demyttenaere *et al.* (2006, 2008) reported a higher prevalence of painful physical symptoms among people with depression (50%) or anxiety (42%) than those without depression (29%) or anxiety (28%) respectively, and that the risk of reporting painful symptoms was higher among people with either of these mental conditions. Currie and Wang (2004), in their large Canadian community sample, found that the rate of depression was higher among people with chronic back pain (19.8%) than those without chronic back pain (5.9%). Bair, *et al.,* (2003) review showed that the severity of either condition (mental or physical) contributed to the worsening of the other. As the different aspects of pain worsen (e.g. severity, frequency, duration and number of symptoms), depressive symptoms become more prevalent or severe. Likewise, as severity of depression increases, reported pain complaints increase. Buist-Bouwman, *et al.,* (2005) study revealed that, depending on the types of physical disorders, physical and mental co-morbidity can have an additive or a synergistic effect. It impacts adversely on both prognosis and work-related outcomes such as absence and rehabilitation (The Sainsbury Centre for Mental Health, 2007; Bevan *et al.*, 2007).

Although the co-occurrence of musculoskeletal disorders and mental ill-health is not uncommon, albeit probably underestimated (Waghorn, Chant & Lloyd, 2006), establishing the precise nature of the relationship and causality is far from straight forward (Parkes, Carnell & Farmer, 2005; U.S. Department of Health & Human Services, Public Health Service, Centers for Disease Control & Prevention & National Institute for Occupational Safety & Health, 1997). The problems and constraints of musculoskeletal disorders (MSDs) could give rise to poor mental health, while the psycho-physiological correlates of poor mental health (like anxiety & tension) could lead to MSDs, or one or more "third" variables could influence both mental health and MSDs. So far, prospective studies suggest that psychological distress can be a cause as well as an outcome of MSDs (e.g. Leino & Magni, 1993). And there are studies that demonstrate that interventions targeting psychosocial factors are also associated with reductions in MSDs (e.g. Pransky, Robertson & Moon, 2002).

2.4.4. Summary

There is sufficient evidence on relationships among exposure to psychosocial hazards, the experience of work-related stress, and effects on employee health, to justify the development and application of a risk management approach to work-related health based in joint problem solving.

Reliable and valid evidence identifies the two most common health problems at work as musculoskeletal disorders and occupational mental ill-health (stress, anxiety and depression). They are the major causes of sickness absence, lost of productivity and being without work. The estimated cost of these is substantial to the individual, organisation as well as society. Thus, controlling these problems and ensuring the well-being of the working population are critical.

There is evidence for co-morbidity in relation to the two main common health problems at work: those reporting musculoskeletal disorders also frequently report experiencing stress in relation to work although only some of those who report experiencing such stress report musculoskeletal disorders. Good evidence exists to show that there is a shared set of causal factors for these main common health problems. These "psychosocial" factors largely relate to aspects of the design and management of work, work systems and work organisations. They are well enough established to have been incorporated into aetiological theories for both musculoskeletal disorders and work-related stress.

The available evidence regarding a shared causation and co-morbidity supports the possibility of a single (unified) approach to the management of the two main common health problems at work: they share important causal factors and there is some co-morbidity. Two things follow: first, such a unified approach may also be appropriate for other common health problems at work if they also share causal factors and demonstrate co-morbidity, and, second, any such unified approach must be flexible enough to allow for tailoring to particular circumstance.

3. THE DELPHI STUDY: METHODOLOGY

This section describes the methodology adopted for the Delphi study, including information on how the expert panellists were selected, the procedure that was employed, and how the data were analysed. Delphi is the method of choice for bringing experts together from diverse backgrounds, and involving them in a constructive debate. The results of such a debate can be used to inform the development of the Management Standards. Here, the Delphi consultation with experts was carried out in two rounds. The results of the first round were fed into a second round which sought to provide more detail and to explore the applicability and impact of the findings.

3.1. The Delphi Approach

The Delphi approach is a structured iterative method for eliciting expert opinion and translating scientific knowledge and expert judgement into informed consensus appropriate for decision-making (Linstone & Turoff, 1975; Buckley, 1995; Chevron, 1998; de Meyrick, 2003; Mullen, 2003). It relies on the harvesting of expert knowledge and opinion, is especially useful for harvesting information on topics for which there is limited knowledge, for exploring complex research questions, for forecasting, and for bridging the gaps between research, policy and practice. The approach reduces the chances that experts will be influenced or biased by other's opinions. However, additional rounds of consultation allow experts to be aware of other's views and to review their first evaluation of the topic (e.g. Hasson, Keeney & McKenna 2000; Keeney, Hasson & McKenna, 2001; Powell 2003).

Studies using this approach are normally completed in three stages: (i) development of the Delphi framework and questions; (ii) initial harvesting of expert opinion, analysis and interpretation; and (iii) validation, clarification and further interpretation of those opinions through a second round of consultation (iteration). Depending on the breadth of the research question, further iterations may need to be conducted until consensus is reached. Up to three rounds are not uncommon in the literature.

A variety of vehicles have been utilised for the harvesting of expert knowledge and opinion during the second and third stages of a Delphi study including face-to-face and telephone interviews as well as web-based methods (Hasson, Keeney & McKenna, 2000; Keeney, Hasson & McKenna, 2001; Turoff & Hiltz, 1995). For the present study, two iterations or rounds (including initial harvesting of expert opinion) were conducted involving expert stakeholders in health and safety management in the UK and a similar group from Europe. Semi-structured telephone interviews were used for the first round of consultation. The issues identified or raised by the interviewees were then further explored in the second round of consultation using a web-based method: open-ended questions were sent by email to a larger group of experts.

Reliability and validity are key issues in relation to the collection and analysis of any data, quantitative or qualitative. According to Jones and Hunter (1996, as cited in Starkey & Sharples, 2001), "the Delphi [methodology] scores highly in terms of content, face and concurrent validity". Although the Delphi methodology, as any research methodology, is subject to a number of criticisms relating to threats to its reliability and validity (e.g. Starkey & Sharples, 2001), it is also recognised as an appropriate method for eliciting and structuring expert knowledge and opinion particularly in areas where previous knowledge is not concrete and where scoping for the future is necessary. Appropriate measures were taken to maintain the validity and reliability of the Delphi responses by (i) ensuring representativeness in participants, (ii) aiming for a high response rate, and (iii) using a standardised procedure and Delphi questions. The backgrounds and experience of participants was considered when interpreting their responses and further clarifications were sought during the Round 1 interviews on ambiguous comments.

3.2. Panellists

The selection criteria and sampling strategy were carefully defined. This was necessary, since the choice of participants in a Delphi study can potentially influence the scope, validity and reliability of the findings.

First, a list of known experts in occupational health and safety was compiled by the research team. These individuals had to fulfil the following criteria: (i) have active and current involvement in health and safety policy, strategy and management or active and current involvement in research into health and safety management, (ii) be either working or be based in the UK with knowledge of the UK situation or working or be based in another Member State of the European Union with knowledge of the European situation, and (iii) be an expert in the field as evidenced by qualifications, the nature of work, writings and other productions, or recognition by peers and other experts.

Names were drawn from the Institute's network of experts in occupational health and safety research and management. The extensive involvement of the members of the research team in work with academic and professional bodies, and industrial and business organisations in both UK and Europe, allows them to be conversant with the leading experts and key players in the field. The list of winners of the *2007 Royal Society for the Prevention of Accidents distinguished service awards* and *Personnel Today's 40 Most Influential People in occupational health* were also consulted. Key players in high positions in the field were also invited to make suggestions of experts to be included in the panel. After discussion with the Health & Safety Executive, it was deemed inappropriate to involve members of the Health & Safety Executive or the Health & Safety Laboratories (HSL), or other individuals intimately involved with the development and implementation of the Management Standards. Finally, the Health & Safety Executive was asked to suggest additional names.

The extended list included the names of 83 experts, 49 based in the UK and 34 in the European Union. They were structured according to country, background (discipline) and nature of involvement in occupational health and safety (see Table 1). In the expert panel, there are proportionally more experts involved in research and practice than in policy, strategy and management. The majority of people from the UK were affiliated to independent research organisations or involved in practice. The majority of experts from the EU were associated with independent research organisations, or government-based research body or funding organisation. In addition, many of the identified experts were involved both in research through universities and in practice through active association with professional bodies.

Representation in the sample for Round 1 of the Delphi consultation was sought, aiming for balance in terms of background or discipline, involvement in policy, and experience in the implementation of the Management Standards. Based on these criteria, 24 experts (12 from the UK and 12 from the EU), were invited to participate (see Table 1). All responded positively (100% response rate). Twenty-four of the larger group of experts participated in Round 2 of the Delphi study (29% response rate). This low response rate is attributed to the summer holiday period. Approximately a third (7/24) of the panellists in Round 1 also took part in Round 2.

<table>
<tr><th>Policy, Strategy and Management</th><th>Research and Practice</th></tr>
<tr><td>Government or regional agency / Supranational body, regional or Government agency
Sample=8 Round 1=3 Round 2=3</td><td>Government based research body or funding organisation
Sample=12 Round 1=4 Round 2=6</td></tr>
<tr><td>Industry, employers or trades union body or large multinational organisation
Sample=11 Round 1=2 Round 2=3</td><td>Industry, employers or trades union based research body
Sample=17 Round 1=3 Round 2=5</td></tr>
<tr><td colspan="2">Professional bodies / Independent research organisation or practice including universities</td></tr>
</table>

and major consultancies Sample=35 Round 1=12 Round 2=7

Table 1: Delphi sample: Identified experts and study panellists

3.3. Delphi Questions

The design of the questions for the first round of consultation was informed by the literature. The nature and content of the questions was discussed with and agreed by the Health & Safety Executive before consultation began. The nature and the content of the questions for the second round of consultation were based on the issues that arose from the first round of consultation. Again the questions were discussed in detail with the Health & Safety Executive. Table 2 presents the Delphi questions.

Delphi consultation Round 1
1. In your view, what, currently are the most common work-related health problems? 2. You are familiar with the Health & Safety Executive's Management Standards for Stress? ▪ Do you think this approach works well? ▪ In your experience, is it being used as the Health & Safety Executive intended it to be used? ▪ What are its strengths and weaknesses? ▪ Could it be improved? 3. Do you think the Management Standards approach as used for stress, could be used for the other common health problems you mentioned? ▪ Could it be used in individual case management/return to work? ▪ Would it be suitable for use in SMEs? ▪ If so, would you need to change or expand it? If so, how?
Delphi consultation Round 2
1. How can the "standards to be achieved" (Management Standards) be used for a more positive approach to common health problems at work (i.e. one that taps into positive aspects of work and one that facilitates return to work)? 2. What are the higher and lower organizational size boundaries for use of the Management Standards in relation to SMEs and micro organisations? What is the optimum organisational, departmental or sectional size for running the Management Standards? 3. What specific changes are needed for the Management Standards approach to work with common health problems: a. the overall Management Standards strategy model; and b. the Indicator Tool (risk assessment)? 4. How can public and occupational health be effectively integrated in theory research and practice? Can the Management Standards approach be used as a vehicle for such integration? How will that work in practice? 5. What additional resources may organisations need to support a Management Standards approach to common health problems at work, in terms of management skills, interventions, OH advice/guidance etc?

Table 2: Delphi study Rounds 1 and 2 questions

3.4. Procedure

In May 2008, the 24 experts were contacted by email and invited to participate in Round 1 of the study. A letter was sent explaining the purposes of the study and how it would be conducted. Additional information was also sent on the Management Standards. Participants were assured that all information would be anonymised and that no information that identified them would be shared with anyone outside the research team, without their provided explicit permission. All responded positively and interview times and dates were subsequently arranged. Interviews were conducted by telephone between June and August 2008. The average duration of the interviews was 35 minutes. With panellists' permission, the interviews were recorded and transcribed.

The Round 2 of the study was designed to further explore the issues that arose from Round 1 using a wider group of experts. It took place in July and August 2008. All 83 experts, except one whose email contact was not possible to locate, were invited to participate. Of the 82 emails sent, 24 were returned. Three experts declined participation. In the invitation, a brief summary of the results of the initial consultation was provided along with the five open-ended questions. The purposes of the study were explained to those who had not participated in Round 1. Experts were encouraged to reply by 11 August. A reminder was sent to those who had not replied and were not on holiday after this date. Although the holiday period was prohibitive for more thorough data collection, a range of excellent responses were collected indicating expert consensus on a number of areas.

3.5. Analysis

The analysis of the information collected followed the advice set out in Starkey and Sharples (2001) focussing on thematic analysis (Grbich, 1999), which is "a method for identifying, analysing and reporting patterns (themes) within data" (Braun & Clarke, 2006). It involves several phases: familiarising oneself with the data through reading and re-reading and noting down thoughts, coding the data across the entire data set, collating codes into potential themes, checking if the themes work in relation to the coded extracts as well as the entire data set and reviewing themes if necessary, generating names and descriptions for each theme, and writing up the analysis.

4. RESULTS

The results of the Delphi study are presented in this section. The study was conducted in two rounds: interviews with a sample of the expert panel, followed by a web-based (email) Delphi using of the whole panel. The first round was largely exploratory and the second round sought to expand on the key issues that arose from discussions of the findings of that first round. Throughout the report, "interviewee" refers to a participant in Round 1 of the Delphi study, whereas "respondent" refers to a participant in Round 2 of the Delphi study. A summary of the findings is presented at the end of this section.

4.1. Delphi Round 1

4.1.1. Common work-related health problems

When asked what were the most common work-related common health problems, the majority of respondents mentioned (i) musculoskeletal disorders (including back pain, repetitive strain injury, and static workload) and (ii) common mental health problems (including stress and related problems such as depression, anxiety, fatigue, and burnout). Cardiovascular and cardiopulmonary diseases and other chronic health problems (such as diabetes, and cancer) were also mentioned as important and common work-related health problems. Skin problems (rashes, dermatitis) were also mentioned by some, as was exposure to dangerous substances (chemical and biological agents such as asbestos and carcinogens (pesticides)) that can lead to dermatitis, asthma and cancer.

In both Delphi rounds, experts stressed the fact that often psychosocial issues and musculoskeletal problems or disorders (MSDs) are interrelated, demonstrating some degree of co-morbidity and reflecting the complex nature of work-related health *("And that's the inter-relationship between physical and mental health and the fact that, many organisations will tell you, once you deal with someone who has been off with more than 6 weeks, you are more likely not dealing with a minor mental health problem as well. So you know I think there is probably scope for some kind of understanding of management standards within that"*, Interviewee O). Thus, work-related health risks and problems should not be looked at in isolation. In addition, some respondents mentioned the occurrence of physical problems under the umbrella of minor illnesses (including respiratory problems, self-limiting and self-certified illnesses, such as coughs and colds). Attention was also drawn to the fact that a number of non-specific symptoms exist which can (i) be misdiagnosed or misinterpreted and (ii) lead to a wide range of clinical conditions (including MSDs, stomach and breathing problems). It was also noted that many public health issues are brought to the workplace and that it is important that work-related health and public health are viewed in parallel but as separate concerns ("*Because of the inter linkage between work health and public health it is necessary to look [at] treatable risks and the contribution of work influencing negatively or positively the health or disease outcome*", Interviewee D).

Only one of the respondents distinguished between blue and white collar workers and noted that each of these groups may experience different health problems at work. Common health problems specific to blue-collar workers include those arising from lifting, tripping, asbestos, smoking, including MSDs, whereas common health problems experienced by white collar workers include stress and smoking, where *"stress itself can be broken down into lots of different compartments"* (Interviewee H).

In addition, some respondents based their comments on their own personal experience and professional backgrounds, while others' observations reflected well-publicised statistics. Some discussed common health problems at work in relation to the major causes of absenteeism, disability and work loss. For example, one respondent mentioned that although MSDs is always among the top

problems at work in terms of number of work-related health conditions, these conditions are not always *caused* by work.

When discussing common mental health problems some respondents talked in terms of work-related *psychosocial risks* whereas others referred to *health outcomes* (issues of management or of causation). This is a recurring conceptual confusion which may originate in the careless use of language. Nevertheless, it is important to make a distinction between risks to health and ill-health. For example, stress can be seen as a risk (which can lead to MSDs) or as a health outcome in itself.

Two experts explicitly raised the issue of *definition*: are common health problems those which are "occupational", "work-related", or "significant for work" ("*I wondered whether the Health & Safety Executive were talking about problems that were caused by work or problems which had an impact on work*", Interviewee R)? This is an important distinction, especially in view of the fact that management of common health problems depends on the definition adopted. It was suggested that in the strict view of health and conditions which are caused by work, definitions of common health problems will include illness, disease and specific health outcomes. Problems caused by work include overwork, depression, anxiety, burnout, cardio-vascular conditions and exposure to substances. In the broader view of work-related health and problems that can impact on work, definitions will include a range of conditions which can lead to time off work and reduced productivity, such as stress and MSDs.

Finally, it was mentioned that there are many opportunities at work for promoting mental and physical health, such as creativity, innovation, self-efficacy and so on. One expert noted that these are also very important for the knowledge society and for the European Union from the perspective of the Lisbon agenda. These "positives", it was suggested, could be incorporated into the Health & Safety Executive's approach to the management of common health problems at work.

4.1.2. Current use of the Management Standards approach

The nature and extent of experts' familiarity with the Management Standards (MS) approach was explored. Despite their identification by the research team and the Health & Safety Executive as experts in health and safety and in occupational health, not all respondents appeared to be familiar with the Management Standards. Some had worked with them whereas others were aware of them but did not have any practical experience. Respondents could discuss the philosophy/theory and practical issues related to the Management Standards approach to different extents.

Effectiveness

Respondents were asked whether they believed that the Management Standards approach works well overall. Few were unable to answer this question due to limited practical experience. The prevailing consensus was that although the Management Standards are a needed, innovative, simple, and practical overall approach to managing work-related stress (*"It's being proactive. Instead of letting the problem just present itself, they are trying to get ahead of the problem and go in with preventative measures",* Interviewee J), important implementation problems exist. The Management Standards approach provides a good overall framework that is easy to understand and implement ("*As a framework for understanding and conceptualising stress employers seem to connect quite well with it. The six areas fit fairly well with what they understand […] they understand why if you attack these six areas in the organisation you would be looking at the things called stress. It seems to work intuitively as a framework",* Interviewee F), especially by small and medium sized enterprises (SMEs) *("They are most useful as a radical, simple starting point for SMEs which are probably the main concern for anywhere in Europe"*, Interviewee U).

However, the experts agreed that there is scope for developing the Management Standards further (*"It's not that it can't work, it's just that the experience of applying it to date has really not reached*

full potential", Interviewee P). Specifically, although the risk assessment element of the Management Standards is well-developed, there is still work to be done in terms of how organisations can implement the Standards and what skills and competencies are required to achieve that (*"Line managers lack the skills and knowledge to actually implement the advice and guidance given, and I don't think this just related to common mental health problems I think is applies to other issues in occupational safety and health",* Interviewee Q). Organizations do experience problems following through and implementing risk reduction interventions (*"I am not sure it necessarily steers (companies) to exactly what they need to do to put things right. Perhaps to a certain extent, it perhaps is overly prescriptive"*, Interviewee L). One respondent mentioned that an element of enforcement may be necessary in order to boost the effectiveness of the MS, although this view was not shared by other experts. In addition, it was mentioned that the Management Standards may not add any particular value in large organizations that already have developed broad and comprehensive systems and programmes for managing work-related health.

It was reported that although occupational health management is well-developed in other European Member States, some countries may be better than others in controlling specific occupational health issues and in this sense the Health & Safety Executive's Management Standards approach is an *"interesting management approach which is lacking in the rest of Europe"* (Interviewee G). They are also seen as potentially offering a framework for some Member States which are now looking at addressing work-related health (*"A lot of other European states are looking at what the Health & Safety Executive is doing with the Management Standards approach. How they were defined, how they were being implemented, etc […] It is probably the most practical approach to setting up a system for applying knowledge that we already have",* Interviewee K), although cultural differences may need to be taken into account if the Management Standards are to be adapted to other European countries.

Overall, a question was evident related to whether the Management Standards work in practice or in principle. The consensus was that the approach works well in principle but less so in practice.

Intended use

The consensus among panellists with respect to whether the Management Standards approach is used as the Health & Safety Executive intended was that broadly speaking they are, but not always fully. Identified reasons for the failure to fully implement the approach are: (i) it is difficult, (ii) employers do not get fully involved, and (iii) employers do not understand the link between what is assessed and harm. One panellist noted that *"people have adopted them quite mechanistically"* (Interviewee M), whereas two emphasized the need to go beyond stress: "*Dressed up entirely with dealing with stress – that is I think a shame. It's misleading and closing people's minds down to what I think the standards are actually good at*" (Interviewee M), and *"as far as I am aware, people approach it with their stress goggles on"* (Interviewee O).

Strengths

In order to substantiate their answers to the previous question, panellists were asked what they considered to be the main strengths and weaknesses of the current Management Standards approach. Identified strengths covered a range of issues from the simplicity of the Indicator Tool and the comprehensiveness of the risk management process to the broader benefits for good management practice.

Some experts viewed the Management Standards approach as straightforward to use, inexpensive, and easy to access. The tool in particular is well developed; it provides a comprehensive coverage of the six main dimensions of work that can impact on stress and it constitutes *"a lean approach"*. In addition, it is "information-driven" ("*One thing is that whenever you have a system such as this, that is information-driven, so you facilitate for enterprises to take action",* Interviewee K). The fact that change, a broader organisational level characteristic that can impact on employees' experience of

stress, is included in the six dimensions was seen as positive. Furthermore, it provides a strong business case, it is clear what is required, the tool is normed, the approach provides a benchmark and allows organisations to compare their performance against others', it focuses on problems and solutions, and helps organizations to create actions to tackle identified problems. Not all panellists agreed that the business case is currently adequate ("*It needs some "teeth", the business case*", Interviewee K). The Management Standards approach helps managers to "*break down a big problem and non-specific concerns into specific identifiable manageable practical problems for which solutions can be found"* (Interviewee O), such that *"an employer can not turn round and say they didn't know or couldn't have known as it is too complicated, because I think it sets it out in words of one syllable. It gives them a proforma […] it gives them a calculating method. It does the work for them"* (Interviewee H). Ease of interpretation in terms of the use of the Indicator Tool was a point of disagreement among experts ("*Sometimes ease of interpretation leads people to think it's simplistic […] Sometimes a strength is a weakness in a different context*", Interviewee E).

Some experts mentioned that although the Management Standards approach in its current form focuses on work-related stress, it may have some indirect effects on other work-related health problems. There are "*clear side-benefits in terms of effects on other areas such as MSDs*" (Interviewee K) such that the approach is *"indirectly at a secondary level useful for dealing with diagnosable conditions"* (Interviewee M). These comments reflect an acknowledgement that work-related stress is not an outcome that occurs in a vacuum and that the identified work-related health problems are often interrelated and can have common antecedents as well as outcomes (see section 4.1).

Many of the experts suggested that the most important impact of the Management Standards approach on organisations is that it can lead to better general management. The approach reflects good management, allows managers to look at how work is organised, and provides an important clear structure for acting on work-related health, "*which may make you think more broadly than just psychosocial issues*" (Interviewee K). By setting out the process clearly and unambiguously, and by presenting a clear business case and performance outcomes, the framework helps to incorporate the management of psychosocial issues into business practice in a straightforward and methodical way (*"Clear side-benefits in terms of […] managers reflecting on how they behave as managers and how they manage the organization and how work is organized",* Interviewee K; *"Changes thinking in a positive direction away from stress management",* Interviewee O; *"Management itself is probably not so much interested in which common health problem. It is more important to show the benefits of addressing the six dimensions – what are the beneficial outcomes of these six dimensions",* Interviewee A).

Weaknesses

A number of weaknesses with the Management Standards approach were also identified, ranging from practical issues to broader implementation and conceptual issues.

Several experts mentioned that broader organisational level determinants of work-related health are noticeably omitted from the assessment tool (these include, for example, organisational culture, degree of the organisations' employee orientation (i.e. the organisation's focus on employee issues), open communication, organisational trust, justice or fairness, and employee involvement). Focus groups are costly and time consuming to run, as is the whole implementation process, often due to lack of resources within the organisation and especially so in smaller organisations. The paperwork related to implementing the approach is complex and demanding and the related Health & Safety Executive website is not very comprehensible. The Indicator Tool questions are not very probing, do not show how the six areas are interrelated, and only provide an assessment at one point in time which provides a limiting view of work-related stress. The norms do not often appear meaningful. Organisations may often have different or conflicting priorities and it may be difficult to maintain the commitment of the management team. Finally, the Indicator Tool was perceived as lacking concurrent validity (*"We had actually tried out a pilot in an organisation using three different*

measures. One of which was the Indicator Tool, and that came out as showing that they were at the amber level. But the other tools used showed that actually they weren't doing too badly at all […] maybe that is a problem with data being skewed from a relatively small sample",. Interviewee L). Although organisations can use alternative assessment tools, respondents noted a lack of good quality alternatives ("*I don't think our assessment tools are very good. I think a lot are out of date"*, Interviewee N).

The discrepancy in emphasis between assessment and action was another frequently mentioned problem, the latter being seen as the underdeveloped part of the process. The approach "*identifies a general area of weakness in the organisation but doesn't necessarily help an organisation identify ways of improving other than 'we need to do better in this area'*" (Interviewee L). It is especially important for smaller organisations to explain how to implement the framework, such that "*the smaller the companies, the more complete advice they want"* (Interviewee G). The experts agreed that the guidelines for developing targeted improvements are not well developed. Such information is more difficult but also more important for the more intangible psychosocial problems.

Consensus also emerged on the issue of the management competencies required, especially among the practitioners. Specifically, the experts mentioned that it is important to examine the different competencies and capacities of different stakeholders (including managers and employee roles) and different parts of the organisation, both in terms of (i) generating stress-related problems and also (ii) as the resources for dealing with these.

Adopting "stress" as the focus of the general framework for managing work-related health was also questioned by the experts. Some mentioned that the use of the word "stress" can evoke fear in managers ("*The reaction by managers to stress Management Standards approach is pretty varied. Include horror when mention work stress. Puts them on the defence*", Interviewee M) and some questioned the meaning of work-related well-being ("*What I don't think we have as yet is adequate data on what we mean by 'well-being in the workplace' and promoting it and what would work for employees. That is the kind of information we need to be gathering*", Interviewee N) and risk ("*I don't* think *Health & Safety Executive understand what it means by 'risks'*", Interviewee N). The need for a more positive approach to managing work-related health was raised by the majority of the experts and discussed in detail later on.

Furthermore, there was disagreement on whether the evidence-base for the Management Standards approach is adequate. Further probing indicated that this was attributed to the fact that by "evidence-base" the experts referred to two different issues. The first was related to the evidence for the six dimensions of the Indicator Tool as the main causes or antecedents of work-related stress. Although some supported the choice of the six dimensions (*"To reduce the complexity of stress to six areas is a good way because the six areas are evidence-based"*, Interviewee D*; "I think the basis for the Management Standards approach in terms of demand, control, support […] is pretty good and it is the only area where we have much evidence about the impact of job characteristics and psychological well-being", Interviewee O*), others were not as positive (*"My view, as they were presented, is that they are talking about illness and not ill-health. The evidence-base they were derived from is mostly taken from studies of sickness absence. Sickness absence not the same as absence caused by ill-health by disease or injury",* Interviewee M), perhaps reflecting experts' background and expertise.

Second, an additional concern was related to evidence for the effectiveness of the approach, its implementation, and its impact for tackling work-related stress. Thus, experts questioned the effectiveness of the assessment tool (*"I have not seen strong evidence that the implementation of the Health & Safety Executive Management Standards approach has actually reduced stress",* Interviewee B; *"A more sophisticated audience can question the validity of the instrument and the interactions between questions",* Interviewee E). It was seen as especially difficult to assess cause and effect since changes can have a delayed impact (*"Trying to get good data on whether it has been effective enough in the sense that with the health thing, outcome data just wouldn't get you there.*

Cause it is going to take 5, 10 20 years to be obvious what is going on, in terms of any change because of the latency effect. So outcome data is hopeless, you are left with self-report data which we know is subject to amplification and attenuation effects", Interviewee P*)*. The lack of evidence-base for informing effective practice was also mentioned (*"The main weakness is that there isn't a very good scientific evidence yet that underpins it. And I think that now we are moving to the evidence-based occupation health practice, I'm not absolutely convinced we have rigorous scientific data that can sustain the approach",* Interviewee R; *"There is a lack of evidence about good interventions how to intervene where to intervene how long to intervene",* Interviewee D). In addition, one panellist mentioned that the research literature on which the Indicator Tool was based focuses on individuals with problems (such as sickness absence which differs from absence caused by disease or injury) and that such a management approach may not be appropriate for individuals without such problems. The importance of these concerns was lucidly expressed by one the of the experts: *"With any initiative we have to think what the [impact] is when we scale it up cause you end up talking in terms of millions of pounds and then you have to think whether spending these millions of pounds is cost-effective in terms of reducing the problem that you started with in the first place"* (Interviewee B).

It is important to note that the concerns on the evidence base underpinning the Management Standards, in many ways, reflected experts' different occupational backgrounds, knowledge of the approach, and experiences in using the approach. These concerns also help explain the disparity in answers to the question whether the approach works well overall.

Scope for improvement

Although the above criticisms of the Management Standards can be seen as starting points for recommendations for improving the Standards, a wide range of additional suggestions were provided by the experts as a response to the question of whether the Management Standards approach (including the Indicator Tool) could be improved. Responses were extremely diverse, but consensus emerged on a number of important issues. In its uniqueness and potency as a tool for change, the approach was seen as a panacea for managing work-related health in its broader sense, spanning the areas of health promotion, non-work related health, and organisational development.

In terms of risk assessment, the experts suggested that the current tool should be expanded to include a focus on the organisational level and climate and issues such as communication, trust, and organisational culture ("*Because people know what is meant by culture […] the seventh factor for psychosocial injury*", Interviewee H), and fairness or perceived injustice at work among the core dimensions of the Indicator Tool. An assessment of resources and competencies for managing the identified risks is also essential for good risk management (*"It is important to enrich the six areas by a resource-oriented approach",* Interviewee D). Other suggestions included the need to make the assessment tool slightly less easy or more complex ("*if you oversimplify you run the risk of trivialising them*", Interviewee K), redevelop its norms, and most importantly, take into account the inter-relationships between the six dimensions. The issue of context-dependency was also raised: it was generally agreed that the risk assessment needs to be made more precise and more probing, perhaps by expanding with questions tailored to the specific organisation and context ("*I'm not sure as a generic tool there is a lot you can do about that. That further step requires more knowledge of the target organisation*", Interviewee L). Finally, broader organizational-level determinants of health, resources and *opportunities*, determinants of work retention, and roles and responsibilities should be incorporated in the assessment. From this perspective, the concept of "risk" should be re-examined ("*I think that the concept of risk needs to be re-examined and there needs to be a much clearer idea about two things: the difference between 'risks' and 'modifiable risks'; secondly, where responsibilities lie for dealing with these modifiable risk factors*", Interviewee N).

Similarly, acknowledging that work and non-work related health are interlinked in both rounds of the Delphi study (*"It is difficult to differentiate the demarcation between whether it is a work-related problem or it's an outside of work related problem, and the two are inextricably linked"*, Respondent Q), the experts expressed a preference for broadening the assessment of work-related health. Some

stated that assessment should have the capacity to encompass different facets of mental ill-health (*"I think there needs to be a reflection of the various components that may be making up the mental ill-health and stress and not all of those are gonna come out of the workplace. I think there needs to be a gathering of minds to see who can influence the various components of this for them to get comfortable putting together something that is more joined up",* Interviewee J). Similarly, it was suggested that job loss and job insecurity should also be addressed through the Management Standards approach or perhaps through a mechanism in the UK other than the Health & Safety Executive (*"There is a bit about change, but that aspect of actually job loss and if it's not acknowledged in these standards, it's then not clear then who else is trying to catch that as an issue. Or maybe it's simply considered quite insignificant, I don't know. It seems as to be a bit of a silent issue in the debate in Britain on this",* Interviewee J). Finally, it was also considered important to look at demographic trends, the ageing workforce and work capacity.

In line with changing any negative connotations of the current Management Standards (section 4.2.4), general consensus was also expressed for the necessity to change the "stress" label (*"If positively displayed as a way to deal with people at work, and stress wasn't even mentioned, people would take it much more seriously and applicable to all the health problems",* Interviewee M).

Additionally, it was felt that the quality of the implementation of the Management Standards could be improved. The experts indicated a number of ways for achieving this: providing specialist intervention services at competitive and affordable rates (especially for smaller organisations), providing access to external human behaviour expertise for advice on types of interventions that are appropriate for the specific organisation, and supporting the internal change agents in their role ("*It is tricky if the person in the organisation who wants to do this is not particularly well skilled in making that business case*", Interviewee P). Furthermore, it would be useful to develop a more prescriptive approach, not in terms of the process of implementation (see section 4.2.1) but rather in terms of the actions required to address identified problems ("*Incorporate within management structure, more of the things that predict strategy with symptoms and recovery*", Interviewee N). A few respondents also mentioned the need to provide good practice examples for specific sectors or types of organisations (small or large) (*"Examples of what other companies have done and what has worked. Maybe it is not perfect, you didn't solve everything, but it kind of shows you what is possible to do. First, that it is possible to do something and second what you can do",* Interviewee K), and to look at communication within the organisation ("*the Management Standards approach needs to build into it a way to improve communication between colleagues and managers",* Interviewee N*)*.

Furthermore, suggestions for capacity-building were also provided. Suggestions included increased management training and understanding (*"You need managers alert and able to assess different kinds of people. Down to the judgement of the person on the ground and the manager needs talent",* Interviewee M) or redirection of management training to better management overall, better engagement between the Health & Safety Executive and management in organisations (*"Engagement between the* Health & Safety Executive *and that level of management - I think that needs to be tackled, the line-management area and it's also throughout the organisation",* Interviewee Q), setting criteria for the behaviour or employers and occupational health services, and re-examination of the role of occupational health services (*"Reconsideration in the nature of Occupational Health and how it is managed and funded […] and move away from division between attendance and sickness management",* Interviewee N). Overall, a focus on the whole process and system of responsibility, what is the role of different parts of the organisation and the various stakeholders in generating and solving work-related health problems was advocated. It should be noted that some of the experts, especially those from the EU panel, were not aware of the Health & Safety Executive's work on management competencies (Yarker, Lewis & Donaldson-Feilder, 2008; Yanker, *et al.,* 2007).

The majority of panellists also mentioned the need to examine the evidence for the effectiveness of the Management Standards approach ("*studies of the effectiveness of the Management Standards approach have been conspicuous by their absence*", Interviewee L), to review how the Management

Standards approach is implemented and whether it is making a positive contribution in organisations ("*It's maybe just to be aware of that point and to maybe question or challenge people who have adopted these standards to hear how that has worked in practice. Whether they feel it has engaged people more or maybe marginalised people*", Interviewee J). It was suggested that this would allow the Health & Safety Executive to re-examine the process and the core constructs or dimensions on the basis of new studies and new information. It should be noted that some of the experts did not seem to be aware of the Health & Safety Executive's SiP1 evaluation studies (Cox *et al.*, 2007b; Broughton & Tyers, 2008).

The need for a stricter rule by the Health & Safety Executive was also noted (*"You can make the business case as much as you want. Persuade organisations this is good for you, this is not only a legal requirement of course from the framework directive. But also, if you don't do it, there are consequences",* Interviewee K). Specifically, two respondents mentioned that making the Management Standards approach mandatory or setting out the principles which managers are expected to uphold (*"All of that guidance could be superimposed into a Code of Practice",* Interviewee H) would be an improvement over the current situation, although this view was not shared by all experts.

A broader approach to managing work-related health

There was overwhelming consensus for a broader and more comprehensive approach that encompasses health and safety issues. There was strong agreement in support of a focus on promoting positive health at work rather than simply managing risks to health, an enhanced focus on health promotion and prevention (*"I think aligning it with an approach which is based a bit more on prevention and aligning it which an approach that you might adopt for say like safety culture and management of risk generally",* Interviewee P), and a move from a reactive to a more proactive approach (*"More understanding of positive work outcomes and how they could impact on productivity and performance",* Interviewee O). Such a broader approach would be used as a means to reconcile the different facets of work-related health (individual and organisational, work and non-work, etc) and their management, and develop a more positive strategy.

Such a view would not separate the management of work-related stress from the management other work-related health problems (*"A themed-based approach like stress isn't gonna work. It's needs to be more embracing than that, it needs to be broadened. Because there is less chance of an organisation dealing with stress well if it doesn't do other things well. In the sense that, if you've got good systems in place, understanding how your organisation is performing that go beyond looking at outcome data then you need to have that in place […] It is really very improbable that organisations are going to have good systems for dealing with slips and trips hazards for example, and not for other issues"* (Interviewee P) and *"In terms of improving them […] people get interested in the Management Standards approach because they think they have a problem with stress, and the first thing in a way that they need to get their heads round is that it is not necessarily a stress problem it might be a range of more specific problems. I am not sure that that message is clearly enough enshrined enough in the early stages of the Management Standards approach",* Interviewee O).

It would also use different indicators of how well an organisation is managing work-related health overall (*"So accidents or ill-health... it isn't necessarily a good indicator of how well a company is managing risk […] And its ways for actually getting some sort of measure indication of learning more about your organisation. So a long list that can be theme-based or topic-based, it could be around stress, MSD based, it could be to do with exposure to substances, it could ... do with machine guarding",* Interviewee P).

Such an approach would allow organisations to choose from an array of measures (*"It all comes down to the same thing at the end of the day; the techniques are common"*, Interviewee P), which would focus on good management and the development of learning organisations and the capacity for organisations to respond to challenges to work-related health (*"I think there is a lot of scope for what*

you call learning organisations. Learning about potential challenges to accidents or health for your employees and learning about how well your organisation is learning about managing those things […] What they are unable to do without some sort of external assistance is to actually then work out an agenda for change based on that evidence – that is where they fall down", Interviewee P).

This is perhaps a reflection of a need for a shift towards a view where work-related health is central to organisational thinking and not an "add-on" or a response to legislation requirements (*"I suspect that if they actually make the transition from thinking specifically about stress to thinking about organizational problems actually it can help them in a number of other ways. I think that is a shift in thinking that the Management Standards approach can bring about in organisations as well",* Interviewee O). Some of these points were further elaborated on when the use of the Management Standards approach for other common health problems at work was explored.

4.1.3. Using the Management Standards for other common health problems at work

The experts were explicitly asked whether they thought that the Management Standards approach as used for work-related stress could be used for the other common health problems that they had identified. Responses varied, perhaps reflecting panellists' backgrounds and perspective in relation to the Management Standards approach. Reflecting the consensus for a broader approach (see section 4.2.5) and with a ratio of 2:1 the majority of experts replied that overall the Management Standards approach can be applied to other common health problems at work, albeit with caution ("*I think for those [hazards] that include a psychosocial element, I think it is possible [to use the Management Standards approach]. But for others it may be possible but very unhealthy to do it […] and certainly wrong to do it*", Interviewee W). One respondent noted, there is a difference between control over risk and control over work, and another expressed this as a "missed opportunity" for the Health & Safety Executive (*"I think that's one of the opportunities that* the Health & Safety Executive *missed in terms of launching the Management Standards approach in that they would have been better to […] in terms of the broader well-being of the people who work in a workplace and to emphasize that a similar approach can be applied to physical health, psychological health, social health and so on. So yes I do think that they can be used for that and I think that it was a missed opportunity when the Health & Safety Executive launched them to tag them to stress less strongly as they did",* Interviewee B).

The Process

There was overwhelming agreement among the experts that "*The risk assessment process applies whatever the issue is*" (Interviewee B). Although a lot of improvements are required on the *practice* and implementation of the Management Standards approach, the overall formulation and risk management *principles* on which they are based are sound (*"You can have a range of precursors that relate to other aspects how well potential challenges to health, safety, and well-being are in organisations. But the process by which you might address these [is] common across themes. Almost like trying to get a management style"*, Interviewee P). The experts noted that the Management Standards process or framework can be easily translated for other common health problems at work (*"For classical risk like vibration, the risk management-risk control cycle has been used before for physical hazards, and the idea of Tom Cox in his earlier publications was to translate this framework from physical factors to psychosocial factors. And it can be translated back again",* Interviewee S), although adequate assessment was identified as a potential challenge (*"But the Health & Safety Executive has already got very good systems like the five steps to risk assessment which ought to be useable for any size of firm trying to manage its risks in those areas. I'm not sure how it can migrate across",* Interviewee R). Against this general consensus, one panellist adopted a different perspective, by viewing the expansion of the Management Standards approach as limited by what policy targets dictate ("*Policy-wise they are driven by targets that are condition-led […] So given that is the way that they are driven, I hesitate to broaden it into an all-encompassing type of assessment*", Interviewee O).

A number of recommendations were made on how the current Management Standards can be adapted for common health problems and what a good approach to the management of common work-related health problems would look like. First, more attention should be paid on boosting compliance with existing legislation and guidelines (*"I think good quality compliance with legislation would have a marked benefit. Yes on paper they have complied [with the manual handling regulations and the display systems regulations], but if you actually look at the extent of quality of that compliance, there leaves a lot to be desired […] Framework is there, it just needs to be better implemented",* Interviewee L). This suggestion was based on the axiom that there is already a lot of adequate information on the management of work-related health, which organisations do not know how to fully utilise. It was also suggested that enforcement with the Management Standards approach might be an appropriate longer-term goal in order to boost compliance (*"In the long-term we should see it as a goal to have enforcement on good working environment which would help with issues around all psycho-social issues",* Interviewee W).

Second, experts recommended employing existing internal expertise and developing the necessary skills base, including trainers and inspectors (*"*The Health & Safety Executive *needs to think about mining its existing expertise of how this approach might be used from those that have really got their hands dirty with it, and then thinking about how they might apply this approach, in what sectors it might be better in, cause it would work across them all. Then thinking about what skill base it would need internally to get people to use it, to the same level as the few people who use it well to get others to have the same practices. That has quite big implications for the trainers and inspectors",* Interviewee P).

Third, it was suggested that a broader approach emphasizing good management (see section 4.2.5) would be sensible and appropriate (*"It makes more sense to go with a more "all-embracing" approach for the health and safety domain. If you look at it in terms of trying to embed ways of working in the organisations, then the principles of the Management Standards approach are widely applicable and not just for stress. To get what you want at the end, it all has to work together […] it's much broader than that",* Interviewee P), especially for improving compliance ("*Perhaps presenting the Management Standards approach in those terms helps organisations where there is still a resistance to signing up to stress as an entity. So seeing them as standards for good Management Standards which coincidentally also address stress, can provide you with a way forward*", Interviewee L).

Finally, the experts highlighted the importance of explicitly examining the mechanisms which relate hazards to health outcomes ("*I think it can be adapted by simplifying it and for instance by looking at mechanisms that employees can see what the issues or problems are in the workplace*", Interviewee B).

An important note was also made on the need to "streamline" the process and integrate it for other common health problems in order to help organisations with the volume of workload related to implementing the Management Standards (*"One of the things that enterprises hate, particularly the small ones, is having to do 17 different things to look at 17 different areas. They want a single-stop shop. If they had to do one for stress and another for MSDs it would be too much for them. It would be a bit of a persuasion job to say to enterprises […] if that is managed properly, you are not just reducing your bill, but many of the risks to innovation, to quality, things that do matter to enterprises",* Interviewee K).

Risk Assessment and the Indicator Tool

Some of the respondents agreed that that at the level of the job and how it is organised, the six dimensions are adequate for addressing work-related health, and specifically stress and MSDs (*"With stress there was a lot more evidence to help and develop those six areas and to develop the process to target them",* Interviewee K) since it reduces the complexity of the evidence (*"To reduce the*

complexity of stress to six areas is a good way because the six areas are evidence-based", Interviewee D). This was based on the judgement that addressing work-related stress can produce secondary effects, and therefore the six dimensions are also important predictors for other health outcomes (*"Psychosocial [issues], particularly stress and musculoskeletal disorders, are very closely linked, they interact with one another, they make each other worse and so on. If you have an interacted system, a way of tackling both, that will bring added benefits*", Interviewee K).

However, many experts, especially those who had been involved more closely with the Management Standards, did not share this view. Rather, they expressed reservations about the evidence underpinning the assessment and choice of the six dimensions (*"The association [of the six areas with stress] is faulty; is not necessarily wrong but fault imposed. Research says that these are the areas that are [linked with] stress, but there are probably other areas too like having to drive long distances to work. For other areas you can't collapse them all into these headings",* Interviewee E), and especially in relation to the job demands-control theory of stress (*"The original Management Standards approach was based on work done a number of years ago [that was] in turn based on demand and control from Karasek – early stuff [that has] got to do with cardio-vascular risks",* Interviewee N). Thus, the recommendation was put forward for the evidence to be re-examined before the approach is expanded into other health problems (*"I think what is needed is to gather information on what employees think about health at work […] I think re-examining what is important to individuals in terms of what they think the problems are and what solutions they might have is really quite important […] Better to just do a new system because [the Management Standards approach] is based on old research and not sure amendments would do much good",* Interviewee N). It was also noted that leading questions can compromise the validity of the assessment tool and thus the Management Standards process should be sensitive to such priming (*"The problem with targeting is that if you target something, people will identify it as being associated with this. But it can be asked, in indirect ways, without leading them",* Interviewee E).

Reflecting this consensus, one of the experts who took part in Round 2 of the study (but not in Round 1) also expressed concerns about the validity of the assessment tool (*"There are serious difficulties with the validity of the tool. Recent publications cast doubt on what it is that is actually being measured, the meaning of significant deviations from benchmark values, and interventions based on the findings are far from convincing. Group data may have <u>no</u> meaning for individuals. There is endless research showing that linearity and convergence are rare. The anticipated benefit of reducing a stressor is far from guaranteed […] The tool is at least psychometrically valid. In that respect it ought to be possible to establish what its findings mean in terms of rehabilitation and sickness absence, but this has not been done"*, Respondent 18) and highlighted the need to strengthen the evidence for the Management Standards (*"I am not sure it is appropriate to apply something developed for one area to be translated to another without an evidence base"*, Respondent 9).

Two experts raised concerns regarding whether the hazards (the six dimensions) should be pre-selected and "imposed" in the assessment strategy or allowed to emerge from the assessment (*"If we took a health-based approach as a start, what are the causal [factors] and how do you reduce them, then that would work",* Interviewee F). Rather, an alternative approach to the work-based intervention perspective was recommended which would rely on the evidence but also allow individuals themselves to identify the hazards experienced in relation to specific health outcomes. This issue was also raised in relation to the validity of the assessment strategy (see section 4.3.2)

There was agreement that the Management Standards process and in particular the assessment would be appropriate for use with other work-related health problems, perhaps more so than for stress, and especially for objective health (*"It would be useful for other common health problems probably more effectively […] Everything is more objective for general health than it is for mental health",* Interviewee E). This was especially the case with MSDs for which more comprehensive evidence exists on the related causes, consequences, and effective management (*"I just think that stress is just one issue among a whole array of things which you want organisations to be doing well. It's also much more easy to deal with MSDs because much more is known about the causes, much more is*

known about the solutions. So going to a Management Standards approach to MSDs, we'd get more bangs for your bucks. Because at best, even with all the will in the world, trying to deal with stress is like trying to nail about half a dozen jelly fish to the wall in turn. The goal posts would always be changing", Interviewee P).

Furthermore, the experts agreed that it is possible to combine the assessment of common health problems at work which have common antecedents, but it would be "unwise" to use a generic approach or the current assessment tool for hazards which do not share the same causal factors and mechanisms. More importantly, it would be essential to maintain rigorous assessment for MSDs (*"The six main areas… I'm not sure they would be the right ones for a bad back; wouldn't [be] ergonomics-based. Probably it would be a lot less complicated for something like a bad back"*, Interviewee F) and non-psychosocial issues (*"My understanding of the Management Standards approach is that is specifically looks at organisational things like change, relationships, demands. They are very psychosocial things, not sure they are terrible relevant if you are trying to prevent exposure to solvents or something",* Interviewee R), and to tailor the approach to different health issues (*"I don't think a generic Management Standards approach to health and safety would be all that good because it would be too wishy-washy and not specific enough",* Interviewee H; *"I think it is useful in terms of things like stress because of the complexity of stress both in terms of the understanding it's causation and risk reduction […] Whereas the problems associated with manual handling other than say carrying out good quality risk assessment to reduce those risks. I can't see how it would really take you much further […] And actually what you probably need [for MSD problems] is something more specific rather than another general tool […] I'm not saying it couldn't but I'm just not sure of its value",* Interviewee L).

Thus, there was consensus on the need to identify the antecedents of other types of common health problems at work before the Management Standards approach is expanded into new areas (*"The main causal factors should be included in the audit or in the indicators. For example, if the outcome is RSI, then the causal factors should be included like repeated movements but also static postures and little variety in work",* Interviewee C). For example, it was noted that the control dimension may not be applicable to chemicals, unless a distinction is made between control over risk and control over work (*"There should be variation on the risk control depending on the type of risk",* Interviewee G). That would allow for a more valid assessment.

Finally, it was acknowledged that expanding the Management Standards approach to other common health problems at work is likely to create a more complex assessment tool, which would be difficult for organisations to accept and implement. It was thus suggested that generic questions could be developed, while still retaining an adequate level of detail (*"The problem is if it's massive […] the larger it is for every single health condition, it's not going to work, is it? I think it's too much to ask somebody to do. A careful balance is needed between the detail required to effectively manage these issues and too much detail which will put management off taking it on",* Interviewee F), specifically in the way that the questions are administered (*"Actually making the questions generic enough to apply to physical and social issues as well... it's that issue of trying to get to open questions rather than closed questions",* Interviewee B).

It should be noted that two of the experts involved in Round 2 of the study (but not in Round 1) explicitly expressed doubts about the usefulness, added value and appropriateness of adopting Management Standards approach for common health problems at work (*"If we're talking about common mental health problems there is good guidance on the Health & Safety Executive's website. If we are talking about addressing musculoskeletal conditions there are many different interventions that may be suitable, and already good information on these on the Health & Safety Executive's website and in publications such as the DSE Regulations, the Manual Handling Regulations and HSG60. If we are talking about cardiovascular problems, I'm not qualified to say what may be appropriate interventions, but I'm not sure that organisations would be willing to intervene in this […] At present I am not convinced that what you are aiming for is achievable (it would require a very large and complex risk assessment) or necessarily helpful in light of a range of other resources*

and approaches available to organisations", Respondent 16; *"You are making the assumption that this is the right approach and I'm not sure it is. Given that the great majority of CMH problems are NOT work related it would seem to have no more validity than trying to do the same for cardiovascular disease or neurological disorders. Health & Safety Executive should concentrate effort within its regulatory role and not stray into broader areas where others may be better placed to provide guidance to business"*, Respondent 19).

4.1.4. Other issues

The opportunities and challenges for expanding the Management Standards approach to other common health problems were further probed with a few more specific questions related to the use of the Management Standards approach in small and medium size enterprises (SMEs) and for individual case management and return to work.

Use in small and medium size enterprises

The experts were asked whether the expanded Management Standards approach would be suitable for SMEs. The overall consensus was positive (*"I think they are helpful in that they provide them with a framework to take things forward. I think they can be",* Interviewee L; *"The model would be extremely good for small organisations",* Interviewee R). Two explicitly expressed the view that organisational size does not make a difference in implementing the Management Standards approach (*"Doing occupational health management in organisations is not different whether it is small or large organisations because large organisations are really built up of many small enterprises",* Interviewee A), although some adjustment is required.

However, some respondents did not share this view, stating that the Management Standards approach is suitable for large and medium enterprises, but less suitable for small and micro enterprises (*"I think measures of that type are potentially powerful to organisations. It's almost completely useless in small organisations. Certainly in micros definitely not … apart from anything else those kinds of organisations don't think in those terms",* Interviewee P). This argument was based on the observation that smaller organisations have different resources (*"They have got limited resources and time. One employee off ill in a very small organisation can have very detrimental effects on the business",* Interviewee Q), structure and needs, which make different allowances or demands on the management of risk and work-related health (*"You have to have a safety or HR department. It's not just on the size of the organisation. It's more to do with what functions they've got and how the organisation operates. So it could work in organisations that are relatively small where you have high levels of mechanisation. It's more to do with the structures in the organisation",* Interviewee P). Smaller and larger organisations also differ in organisational culture and particularly degree of employee orientation.

Additionally, a large number of respondents noted that the new (and current) Management Standards approach needs to be simplified for smaller organisations. In smaller organisations there is stronger peer support, more participation and feedback on an everyday basis, and therefore long questionnaires are burdensome (*"There is a lot of hard work in completing it for small businesses – the simpler and easier it is to complete it will have more uptake from small businesses",* Interviewee B). Therefore a more focused (*"I think you are much better looking at potential sources in a more focused way and I am not sure that the Management Standards approach gives you sufficient focus",* Interviewee L) and more simplified approach is necessary (*"We've used them successfully in small SMEs […] we maybe haven't been trough all the stages as formally with those organisations, but certainly in terms of […] getting people in the mode of identifying issues and proposing solutions",* Interviewee O). It would also be appropriate to contextualise the process or tools for smaller organisations (*"Before completing the questionnaire to give examples, […] contextualise it for a small company. You need to give some kind of examples of what support is",* Interviewee E). It was also suggested that the SME context makes it easier for focus groups to be carried out (*"What could*

be simpler is getting staff together to talk about things which could be difficult in large organisations […] The time spent between different managers talking to different departments processing a lot of survey data that wouldn't apply to a smaller business it would be a lot easier", Interviewee F).

Alternatively, a simplified approach for smaller organisations could consist of combining the Indicator Tool and focus groups (*"But here [SMEs] you can jump directly into focus groups using the six dimensions to structure the discussion in focus groups",* Interviewee A), only using focus groups (*"You probably don't have to use the Indicator Tool – it's perhaps less meaningful to use",* Interviewee O), developing easier assessment tools (*"Large organisations have more people/resources but this only has implications for only producing lower level instruments for SMEs which can work with this kind of tool for themselves",* Interviewee A), providing additional resources and information (*"The standards itself does not need to change but the Management Standards approach would not be sufficient - it is a good tool but it should be supported by other information",* Interviewee G), providing guidelines (*"There should be easy 'how to' guidelines on how to implement improvements for SMEs",* Interviewee A), or good practice case studies (*"I think more case studies with more tailored information, or how to apply the standards to certain sectors that are a bit more different from the others might help",* Interviewee K; *"Case study needs to be directly relevant, attractive to business you are trying to sell it to",* Interviewee X).

Related to this, a consensus emerged on the need to provide sector-specific help (*"What I think it would really help in some cases is sector-specific help. So for areas where we know have more problems or that have special circumstances e.g. agriculture",* Interviewee K; *"[Smaller organisations] need to have some kind of support be it from an occupational service or from a sector organisation",* Interviewee G), or develop a flexible framework that organisations can adapt to their context (*"I think that smaller businesses need a simpler scaled-down version, basically. Need to work out what […] their needs are and develop something that suits them. I think it would be wrong to start the process with a view of what the outcomes would be. What we would need [is] a model that would be suitable for small businesses",* Interviewee W).

One respondent also suggested that it would be useful to provide advice for SMEs on the cost of external support for implementing the Management Standards approach and developing interventions ("*There are some people out there charging a lot of money*", Interviewee E).

Furthermore, a number of experts also agreed that additional support ought to be made available for SMEs implementing the Management Standards approach, as smaller organisations tend to have fewer resources for the management of health and safety. SMEs require reinforced or dedicated internal resources and specific individuals to assume responsibility for implementation the Management Standards (*"Getting someone to want to actually take responsibility and think this is something they should is always a challenge",* Interviewee R) and specifically the stress champion (*"The role of stress champion is taken up by people in addition to their normal duties although for the individual doing the implementation within a large business the pressure is probably less and the proportion of staff resource in small business is a lot more",* Interviewee F).

There was strong consensus among the experts that the scoring and results of the assessment may "not make sense" in small and micro organisations (*"I think the problem with a small business would be […] one or two rogue results could severely skew your values",* Interviewee L). Thus, although the Management Standards approach is useful for SMEs as a framework, the specific details of the assessment can be inappropriate or even inadvertently problematic (*"In a small organisation, if you are only looking to be above the 80th percentile, that's 2 out of 10 […] You would pretty much have to be spot on in order to get above that percentile. Therefore you could see yourself as failing because you are not achieving that. When n fact you are doing pretty well",* Interviewee L).

The issue of anonymity was by unanimous consensus one of the challenges of using the Management Standards approach in SMEs (*"Anonymity, response, being able to talk openly could be difficult",* Interviewee F). It was thus suggested that scoring should be adapted to the number of respondents

and organisational/departmental size (*"Only if you have enough people not to identify them and that's only if you don't use subgroups. If you have less than say 50 people you can't have categories; can't subdivide them by gender or department etc. It would have to automatically [adjust] to the number of people",* Interviewee E).

Finally, the issue of compliance was brought up by a few of the panellists. Enforcement was supported not in terms of policing organisations' activities, but rather as a way of setting expected standards and motivating organisations to fulfil their legal requirements (*"Encouraging those small firms to use it fully would take some enforcement activities; a little bit of publicity of when it had been enforced and perhaps one or two high-case prosecutions where organisation has clearly done nothing about risk to mental health, and then the use of publicity from that to say 'this organisation has been punished, this is the kind approach that would have satisfied the health and safety inspectors",* Interviewee R). Providing incentives to use the Management Standards approach was also suggested as an alternative.

Use for individual case management and return to work

The use of the current and extended Management Standards approach for individual case management and for return to work was also explored. Experts' opinion on this issue was divided equally into three camps: (i) those who supported the use of the Management Standards approach for return to work, (ii) those who believed that the assessment tool could be used for this purpose but in a limited way, and (iii) those who categorically objected to the use of the Management Standards for a purpose other than the one for which they were originally developed. This disparity clearly reflected experts' backgrounds, such that those who had more experience with the Management Standards approach, their development and actual implementation tended to either oppose such an application or suggest limited or cautious use in this context.

The group of experts who supported the use of the Management Standards approach for return to work and individual case management agreed that the six dimensions could be used as a "resource tool" (*"Looking at the main headings from the Management Standards approach would be a good way to break down the cause of their issues, and then finding solutions on an individual level",* Interviewee R) and a way to assess and monitor individuals' adjustment to work (*"The overall list of potential risks and supporting practice or resources could explain why a person had a longer absence and which of these aspects should be improved to make it more likely that the person can fulfil the job task",* Interviewee A; *"You could use this as a framework to assess where they are and use it as a tool for ongoing monitoring for their return to work period",* Interviewee Q).

As a general point, and in terms of the practical implementation of the Management Standards, a few experts stressed that any progress towards more simplified and integrated requirements for work-related health management would be welcome by organisations ("*Organisations are overwhelmed with complexity issues now and if we could use the same item [tool] over and over again for different purposes this could be very helpful*", Interviewee A).

A second group of experts conceded that the Management Standards approach could be used for return to work, but questioned how useful such a use would be. The Indicator Tool can be used as a starting point in return to work, a checklist (*"I think they provide a checklist for ways of being which should be able to d, but needs to be a question of judgement on the day with a problem",* Interviewee M), and a benchmark for specific workplace and workplace-worker "combinations". It was also mentioned that the six dimensions are probably already used in occupational health. However, it was made clear that it can only be used in a limited way (*"It's important to emphasise that you use the indicator as a checklist but not to suggest that this is really a valid detailed measurement. But it's a tool that can be used to assess whether there are specific problems in the workplace or discrepancies between the aspects of the work situation and the capabilities or competencies of the individual. But one should be a bit cautious and not suggesting that this is an individual test",* Interviewee C). Further research would be required for the tool to be valid for use in this context (*"You need to*

benchmark them on individuals. You need to norm them differently. You need to norm them to individuals reporting stress", Interviewee E; *"I don't think we have enough controlled evidence if these approaches are right or a good thing – I want more evidence to back it up"*, Interviewee X).

Some of the experts also provided examples of how return to work is managed in other European Member States, suggesting that the Indicator Tool can be part of an adapted framework or system in Germany and in the Netherlands.

> *"In [Country A] organisations are required to develop an integration plan for employees who have been off sick for more than six weeks a year. This is a good tool for integration management and disability management. In practice it works because health insurances offer support for integration"* (Interviewee D)

> *"I think it could be but I am not sure that is the best way to do it. For example, in [Country B] [organisations] need to have a return to work plan after four weeks of illness signed by and developed with the person […] [It] describes [the] aims/states to be achieved and also describes steps in the process and obligations linked to it which may make a case for return to work"* (Interviewee G)

A third group of experts criticised the use of the Management Standards approach for managing return to work. Their arguments were grounded in the broader perspective or the philosophy underlying the Management Standards approach, making a clear point that the Management Standards (i) focus on the management of work-related health at the level of the organisation and not the individual (*"Definitely not, because that is not the purpose and to take it out of the context of an attempt to remove the causes of stress implies that the working practices should be different from individual to individual. If you are doing a return to work, what you are doing is saying that because this individual has suffered an illness as a result from the working environment you will change the working environment for that individual. You can't do that. You have to change the work environment for everyone. It would be appalling if the Health & Safety Executive is even thinking of that",* Interviewee W), (ii) are concerned with prevention rather than cure (*"[The] Management Standards approach is more to do with prevention, and that is one way of reducing the likelihood of people suffering with stress, or whatever it happens to be. If you look at case management and that kind of thing, that reverts back to the biomedical model of dealing with these issues which is about treatment of the 'victims' if you like. The ethos of the Management Standards approach is more about prevention rather than cure",* Interviewee P), and (iii) use benchmarks developed for organisations rather than individuals (*"I think that would be quite tricky in the sense that the Management Standards approach is based on general figures about the workplace",* Interviewee O).

Two of the experts involved Round 2 (but not in Round 1) of the study also commented on the use of the Management Standards for return to work, stating that the original conception of the Management Standards as an organisational level approach makes it inappropriate for use at the individual level (*"A return to work process is different from the Management Standards process; for example, it is focussed at an individual level, whereas the Management Standards process is currently designed as an organisation-level intervention"*, Respondent 1) and that additional adjustments would be required, such as providing guidance for employers and employees and delineating benchmarks for using the Management Standards for return to work.

A stepwise problem-solving framework such as that which characterises the Management Standards would be appropriate for managing return to work (*"That sort of thing might work better in terms of just being more practical and a step by step approach about what good management actually looks like and what the process of rehabilitation should look like, who needs to be involved, and when, [for] what purpose […] I think that is still probably just easier for organisations to work with than using Management Standards approach",* Interviewee O). It was highlighted that well-developed best practice for the management of return to work already exists and is being used ("*There is best practice guidance out there […] that gives sort of a clear blueprint for best practice in terms of*

managing rehabilitation and return to work", Interviewee L ; *"The work that the Health & Safety Executive did on managing return to work following absence due to work-related stress […] was more from a rehabilitation background*", Interviewee O).

4.1.5. Summary of Delphi Round 1 findings

1. Common work-related health problems
▪ MSDs and common mental health problems (most particularly stress) ▪ Other: cardiovascular and cardiopulmonary disorders, other chronic health problems, and skin problems ▪ Public health issues are brought into the workplace ▪ Different common health problems exist for blue and white collar workers ▪ Overlooked are opportunities at work for promoting mental and physical health
2. Current use of the Management Standards approach
Effectiveness: ▪ Is a needed, innovative, simple, practical approach to managing work-related stress ▪ The approach works well in principle but less so in practice ▪ There is scope for developing the Management Standards approach further ▪ The Management Standards approach is a framework that can be used by other EU Member States Intended use: ▪ Is not used in practice as intended ▪ Some practical difficulties in implementing the approach exist ▪ Employers do not get fully involved or do not understand the link between exposure to potential hazards and harm
Strengths
The Indicator Tool: ▪ Is straightforward, inexpensive, and easy to access ▪ Is well developed ▪ Covers the dimensions of work that can impact on stress ▪ Includes change ▪ Is useful for benchmarking ▪ Focuses on problems and solutions The Management Standards approach: ▪ Helps to break down a problem into identifiable/manageable parts ▪ Is a systematic approach ▪ Provides structure for acting on work-related health ▪ Is easy to interpret ▪ Has potential side-benefits (indirect effects on other work-related health problems) ▪ Can lead to better general management ▪ Helps to incorporate the management of work-related health into normal business practice
Weaknesses
The assessment: ▪ Organisational level determinants of work-related health are omitted ▪ Focus groups are costly and time consuming

- Requires complex paperwork
- The Health & Safety Executive web pages related to the Management Standards are not very comprehensible
- The questions are not very probing
- The questions do not show how the six dimensions are interrelated
- Provides assessment at one point in time only
- Norms do not often appear meaningful
- There is limited evidence of validity
- Lack of good quality alternative tools

The Management Standards approach:

- Most organisations lack necessary resources to support the use of the approach
- Different or conflicting priorities in organisations may exist
- The guidelines for developing targeted improvements and interventions are not well developed
- Develop management and practitioner competencies
- "Stress" is presented as the main focus of the framework for managing work-related health
- Need for a more positive approach to managing work-related health
- Disagreement on whether the evidence-base for the Management Standards approach is adequate: (i) evidence for the six dimensions as causes or antecedents of work-related stress, (ii) evidence for the effectiveness of the approach, its implementation, and its impact for tackling work-related stress

Scope for improvement

Develop the Indicator Tool:

- Include broader organizational-level determinants of health, resources and opportunities, determinants of work retention, and roles and responsibilities, and the dimensions of organisational culture and fairness and perceived injustice
- Include assessment of supporting resources and competencies
- Develop norms
- Show interrelationships among dimensions
- Tailor the questions to the organisational context
- Re-examine the operationalisations and mechanisms of "risk"
- Consider job loss and insecurity as risk factors
- Consider the ageing population

Improve the quality of implementation:

- Provide access to inexpensive and more affordable specialist intervention services
- Provide access to external expertise
- Support the internal change agents

- Make it less prescriptive in terms of actions and interventions
- Provide good practice examples
- Improve communication between employers and employees

Invest in capacity-building:

- Provide management training
- Facilitate engagement between Health & Safety Executive and managers
- Develop criteria for employers and OH services competences
- Examine the role of occupational health services
- Examine the organisation's system of responsibility
- Clarify the role of different stakeholders

Examine evidence for effectiveness:

- Review implementation of the Management Standards and Indicator Tool
- Make the Health & Safety Executive's rule stricter
- Make it mandatory
- Turn it into a code of practice

Change negative connotations

Adopt a broader approach to the management of work-related health

3. Using the Management Standards approach for other common health problems at work

- The Management Standards approach can be applied to other common health problems at work but with caution
- "A missed opportunity"
- Overall: the assessment would be appropriate for use with common health problems but there are some doubts about the appropriateness, usefulness, and added value of such use
- The Management Standards approach can be easily translated for other common health problems
- Adequate assessment a potential challenge
- Boost compliance with legislation and use of guidelines
- Develop the necessary skills base, including trainers and inspectors
- Emphasize good management
- Examine the mechanisms which relate hazards to health outcomes
- Streamline the process to reduce implementation workload
- Context-specificity (the dimensions should not be pre-selected)
- The six dimensions are adequate for stress and MSDs and reduce the complexity of the evidence
- Reservations about the evidence underpinning the assessment and choice of the six dimensions
- Re-examine the evidence
- Avoid leading or priming questions
- Improve the validity of the assessment tool
- Identify the antecedents of other common health problems
- Only combine the assessment of common health problems that have the same causal factors and mechanisms
- Likely to create a more complex assessment tool: develop generic questions but retain level of detail

4. Other issues

Use in SMEs:

- Organisational size does not make a difference in implementing the Management Standards approach
- Disagreement: the Management Standards approach is less suitable for small and micro enterprises (different resources, structure and needs, and organisational culture)
- Simplify the Management Standards approach for smaller organisations
- Contextualise the process or tools (organisational size and sector-specific)
- Combine the Indicator Tool and focus groups or only use focus groups
- Scoring and results of the assessment may "not make sense" in small and micro organisations
- Providing additional resources and information
- Providing guidelines or good practice case studies
- Develop a flexible framework that organisations can adapt to their context
- Provide advice for SMEs on the cost of external support for implementing the Management Standards
- Anonymity issue: adapt scoring to the number of respondents and departmental size
- Enforcement as a way of setting expected standards

- Provide incentives

Use for rehabilitation and return to work:

- The experts disagreed on whether the Management Standards can be used for rehabilitation and return to work – there were three groups of views:

  (i) "Yes":
  - The six dimensions can be used as a "resource tool" and a way to assess or monitor adjustment to work
  - Work-related health management requires more simplified and integrated requirements

  (ii) "Yes but in a limited way":
  - There are questions on the usefulness of such application
  - The Indicator Tool can be used as a starting point, a checklist and a benchmark
  - Further research would be required to validate the tool

  (iii) "Definitely not":
  - The Management Standards philosophy is based on the management of work-related health at the organisational and not at the individual level: a legal question arises
  - The focus is on prevention rather than cure
  - The benchmarks have been developed for organisations rather than individuals

- Develop a stepwise problem-solving framework for managing return to work
- Best practice in rehabilitation and return to work already exists and can be used instead

4.2. Delphi Round 2

The results of Round 2 of the Delphi study are presented in this section. Not all responses felt qualified to answer all questions and they did declare this where appropriate. Throughout the report, "interviewee" refers to a participant in Round 1 of the Delphi study, whereas "respondent" refers to a participant in Round 2 of the Delphi study. A summary of the findings from this round of consultation is presented at the end of this section.

4.2.1. Developing a more positive approach

The first question was "how can the 'standards to be achieved' (Management Standards) be used for a more positive approach to common health problems at work (i.e. one that taps into positive aspects of work and one that facilitates return to work)". A range of responses were provided, although it was difficult to detect consensus.

Consistent with a theme from Round 1 of the study, the experts commented on the need for a broader approach to the management of work-related health (*"They need to be applied as part of an integrated corporate approach to managing the risks to health and well-being. The […] wider approach to risk assessment and control needs to be embedded within an organisation if a Management Standards approach to health is to flourish. It is very unlikely indeed that a Management Standards approach, e.g. to stress will flourish in organisations where this is the only RM [risk management] initiative"*, Respondent 8; *"The standards and states to be achieved are at least already written in positive terms – they can be used as goals in a well-being strategy"*, Respondent 3) and a focus on general good management (*"It should be related closer to other management goals"*, Respondent 14). Such an approach would rely on organisations integrating work-related health into normal business practice.

As a way to achieve this, a stronger emphasis would be needed on the benefits for organisations, organisational learning and promoting healthy organisations. It was stressed that an important

element for such an approach would be a core element of corporate social responsibility (*"In the positive approach legislative requirements can no longer be the trigger; instead responsible business practices/corporate social responsibility, or the added value for the business (business case) will be the trigger. In this respect it is more a 'challenge' than an obligation"*, Respondent 7; "*A win-win situation. Such companies also have policies that facilitate easier return to work for employees with (long term) absence"*, Respondent 5). It was pointed out that a positive psychosocial work environment is explicitly linked not only to occupational health outcomes (absence, turnover) but also to business benefits (*"By relating those standards to be achieved to the concept of healthy organisations: higher morale, better service, higher productivity, higher adaptability to external demands, higher attractively on the labour market because of being a good employer"*, Respondent 15). Organisations should have ownership of the process (*"A more positive approach emphasizes the benefits for the company by living up to the standards and by using the standards as an active tool in the daily management practices […] Companies should have ownership to the Management Standards and look at them as useful tools. Not as something being enforced upon them"*, Respondent 5).

Such an approach requires close collaboration among the different stakeholders (*"It should be considered more an opportunity for a dialogue between employees and management about how they would like the work to be at the particular workplace"*, Respondent 14) and a wider dissemination of the Health & Safety Executive advice on risk management and the management competencies. Specifically dialogue between employers and employees on the return to work process can increase the employees' voice and reduce the employers' power for using coercive actions. The role of the State as an arbitrator is also important (*"As in other aspects of OHS management, a good implementation (in respect of return to work) therefore requires a co-operation between management and preferable unions and safety reps. If the latter are lacking, it is essential that the OHSM is supported - and controlled-monitored - in both its operations and effects by government agencies and-or (reasonable independent) OHS services"*, Respondent 10).

The role of occupational health services was also stressed and a broader remit for OH, from risk assessment to surveillance, job design and education, was advocated. It was noted that imparting more power to occupational health and safety services and professionals and allowing them to be involved in and to shape higher-level decision making is also crucial (*"Safety practitioners, HR and OH [professionals] tend to struggle in this area – and rarely fully realise the potential to have an impact on board level decision making though using audit (barometer) results to influence priorities and budgets. More attention needs to be given to considering how to educate and improve OHP's impact on board level decision making process in [organisations]. Management Standards approaches are potentially extremely useful in this context but tend to have a very modest impact (generally fail) because of the way they are managed by OHPs in organisations"*, Respondent 8).

One of the experts also stressed the importance of learning from the organisational change literature in order to enhance successful implementation of the Management Standards (*"At present [the data generated by the audit tools] is rarely used strategically to inform organisational leaning and strategic decision making in identifying priorities and setting agendas for risk amelioration interventions […] Why were so few of the participating ['Willing 100'] organisations able to make any visible progress in adopting an Management Standards approach? The issue here is […] how to make this happen in an organisational context. The organisational change management element has been a significantly underplayed proponent of the Management Standards approach"*, Respondent 8).

Furthermore, a number of experts advocate a change in attitude towards the role of work for health, the meaning of health at work, and the management of work-related health. This implies an emphasis on the positive aspects of work (*"Although governments cannot mandate the positive aspects of work, these are very important for all involved to emphasize and support. However, again, not as a substitute for reducing the negative health risks but as a combination of reducing the negative and enhancing the positive. Such a combination is the most effective to support health and also*

productivity at work", Respondent 10), and avoiding any negative connotations which can create expectations and which can direct the management of work-related health (*"The standards as they are currently written do run the risk of emphasising work as a hazard to health, although the current version is much better than the first. Careful design of the questions and the literature to avoid implications that ill health is an expected impact of stress at work is one solution. Avoidance of the term 'stress' may be another strategy. There are so many negative connotations around the term and with problems surrounding its definition that it may be better to replace it with another term such as 'wellbeing'"*, Respondent 17).

A change in culture and a stronger emphasis on prevention and a proactive approach was also advocated, reflecting expert consensus from Round 1 of the study (see Section 4) (*"There needs to be a RM culture – that reflects the approach to risk assessment and control. Few OH professionals have this perspective at present. Most remain firmly rooted in a reactive approach based upon 'fixing broken individuals'. This mind set must change if a Management Standards approach is to flourish […] In alignment with the ascendant emphasis we have seen grown in the public health sphere, the emphasis needs to be on prevention, with aspects relating to maintenance of individuals (Stress counselling CBT etc) and rehabilitation and managed return to work assuming a lower profile. This requires a paradigm shift for most mainstream occupational health professionals – see Dame Carol Black review (2008) conclusions – and a move to a risk management (control) based approach already established within the occupational safety domain"*, Respondent 8).

The experts also recommended the use of supplementary assessment tools for additional (positive) work-related health outcomes (*"The areas of the standards should have a clear link to common health problems and to positive aspects of well-being at work"*, Respondent 4), such as employee engagement and job satisfaction measures, as currently used in the NHS. Other suggestions include providing examples of good practice, making social audit of companies a standard requirement, and initiating recognition schemes such as "employer of the year" in regard to the application of Management Standards.

Furthermore, it was suggested that a focus on work capacity would also be a useful way towards a more positive approach (*"Making work more comfortable and accommodating to their perceived needs (capacities) will probably be of benefit at difficult times"*, Respondent 18), especially for facilitating return to work (*"This may refer to the capacity of people being able to work until the regular retirement age. This approach would imply to focus on preserving the work ability of the workforce (in particular health status, skill level and coping capacity)"*, Respondent 21). Finally, job loss/job insecurity was mentioned in Round 1 as a way for improving the current Management Standards and re-emerged in Round 2 (*"It may be positive if change which results in job-loss can find a role with the Management Standards […] Perhaps as a bridge on these matters "return to work" need not be confined to return to work with the current employer and instead could consider other opportunities"*, Respondent 6).

4.2.2. Optimum organisational size

The second question in Round 2 of the Delphi study explored the optimum departmental and organizational size boundaries for use of the Management Standards in relation to SMEs and micro organisations. Responses were roughly along two lines: (i) the content of the Management Standards Strategy model and (ii) the practical and application aspect of the model, in particular the indicator tool (risk assessment tool). Although the majority of the experts tended to focus on the latter, some also drew a distinction between the model (the process) and its application. The general consensus was that there are organisational boundaries in terms of the practical application of the MS, but not in terms of the underlying process and framework.

There was agreement among experts that the good management approach advocated by the Management Standards was "generic", "universal" and "general", and thus applicable to

organisations of any size (*"The principles are universal, and also applicable in SME's and micro firms"*, Respondent 7; *"Because the standard is addressing a good management approach, I'm not sure that there is a boundary size of organisation to which it can be applied – surely the approach applies to all"*, Respondent 16). Similarly, one expert argued that the 'key psychosocial characteristics of work' (i.e. the six dimensions) have the potential to affect workers in both small and large organisations and thus should be relevant to any organisational size (*"MS can be used in all organisations, irrespective of their size, because they concern the key psychosocial characteristics of work, which can potentially be the source of stress for every worker – in a small organisation and in a big organisation"*, Respondent 11).

In relation to the implementation of the approach and the use of the Indicator Tool, the majority of experts considered it as inappropriate or not so useful for small organisations or departments, particularly those with fewer than between 20 and 50 employees (*"In common with safety culture/climate survey approaches – Management Standards approaches make little sense in small and micro organisations (i.e. orgs with fewer than 50 employees)"*, Respondent 8; *The Management Standards need at least twenty-thirty people large organisation or department"*, Respondent 20). Some advocated the use of focus groups only in small and micro organisations (*"It seems that the proposed questionnaire may be used mostly in medium and big organisations whereas in the small ones – below 30 employees – it is better to limit risk assessment to the application of the focus group method only"*, Respondent 11), others suggested that benchmarking would not be relevant to smaller organisations (*"The standards may have some value for benchmarking in larger organisations"*, Respondent 19), yet others recommended the development of sector or occupation-specific Management Standards for smaller organisations (*"The smaller the companies, the more [the MS] should appeal directly to the individuals concerned. For SME's and micro firms it is vital to be very concrete. I would recommend sector or occupational specific standards for companies with less than 20 employees"*, Respondent 7), or guidance for OH services proportionate to OH needs.

Some of the experts also expressed a concern in relation to confidentiality and anonymity in small organisations/departments (also see Section 4.4.1) (*"In terms of the Indicator Tool that Health & Safety Executive provides as a potential part of the Management Standards Process, since it is a survey measure, confidentiality considerations come into play and it should be used for larger teams only"*, Respondent 1). They also stressed that a small sample size could negatively impact on the statistical analyses and the validity of the results (*"On process requirements, e.g. if you want to run data for analysis, there are practical demands for "threshold values" of a reasonable sample size"* (Respondent 21)

With regard to optimum size and the higher organisational size boundary for running the MS, comments were very limited.

4.2.3. Specific changes

The experts were also asked what specific changes are needed for the Management Standards approach to work with common health problems, in terms of (i) the overall Management Standards strategy model and (ii) the Indicator Tool (risk assessment). These suggestions add to those provided in Round 1 of the study.

Reflecting opinion from Round 1 of the study, two of the experts stated that such an integration may not be feasible in practice (*"Management Standards come from an evidence base of the causes of workplace stress. CMHP [common mental health problems] also originate from outside the workplace. Some workers groups do not want employers interfering with their lives outside work or asking questions about finances/family life so difficult to see how they could be used"*, Respondent 9; *"I do think that the Management Standards approach does encourage good management, which will help with the prevention of common work related health problems ([…] but also MSDs). I'm not sure that they have a significant role to play in addressing common health problems per se. I think that it*

would be down to OH/management to support individuals who have these health problems, rather than an organisation wide approach to reducing non-work related risks", Respondent 16).

In relation to the first part of the question (the overall Management Standards model), a wide range of suggestions was offered, including:

- a focus on consultation and joint discussions between the stakeholders (*"More focus on the process and the joint discussion. A possibility could be to map both risks and positive factors at dialogue meetings rather than using questionnaires"*, Respondent 14),

- attention to the empirical research evidence base supporting such an integration (*"If you want meaningful replies to this you need a much more considered response and probably some underpinning research"*, Respondent 19; *"The structured connection to common health problems must be visible"*, Respondent 4),

- tailoring the process to particular health concerns (*"No specific changes to be made to the basic model but it will need to be tailored to suit the health problem concerned. It cannot be used universally but would be useful in other areas akin to stress and for other widespread problem areas such as MSDs. It would not be suitable for dealing with a health risk arising from the use of a particular and individual substance"*, Respondent 12),

- explicitly considering wider microeconomic drivers for change within organisations before such an integration takes place (*"There should be a discussion/debate as to whether the strategy for the Management Standards should be mindful of the macro-economic drivers for change. The discussion would then inform whether the balance of current arrangements is sufficient"*, Respondent 6),

- being mindful of the link between occupational and public health (*"It should be clear that the OSH problems might also have public health relevance"*, Respondent 7),

- a clear recognition that management quality and good business are interlinked (*"Just a recognition that […] good management leads to good health, beyond just mental health; that good health is good business"*, Respondent 16; *"Reducing obstacles to 'return to work' and increasing the probability of 'work retention' […] are both related to management quality and mutual accommodation"*, Respondent 18),

- allowing flexibility in applying the Management Standards and recognition of existing alternative approaches (*"I think probably just a recognition that […] there are approaches available (HSG65) for successful health and safety management. I don't think the Management Standards should seek to replace existing models of management. They should be integrated into an overall management approach"*, Respondent 16),

- avoiding negative connotations (*"Presenting the scores as 'risk factors' for causation and aggravation of health problems is likely to undermine any good that can be done"*, Respondent 2), and

- broadening the assessment to the interface between work and home (*"Consider aspects of work-live balance (closely linked to working time issues and to gender issues)"*, Respondent 21).

In relation to the second part of the question (the risk assessment and its data-gathering Indicator Tool), experts' suggestions included:

- developing additional scales/variables or additional assessment tools which are also based on evidence and psychometrically tested (*"In order to cover additional hazards relating to*

additional health risk factors, the Indicator Tool would need to have additional scales added. The psychometric properties of these new scales would need to be tested", Respondent 1),

- re-examining the items included in the assessment tool (*"Consider overlap between certain questions (e.g. 2 and 16 on breaks and 6, 9, 18, 20,22 on work intensity and perhaps collapse items"*, Respondent 21; *"Reduce the tool to the set of questions which actually indicate something about retention and rehabilitation (probabilities, time periods, permanence) […] Evidence is that 5 out of 35 questions are redundant even for the 'stress' interpretation and quite likely, only 10 questions have any significant power"*, Respondent 18),

- adding items on job insecurity (*"which is a very strong stressor"*, Respondent 21),

- considering the incorporation in the assessment tool of theoretical models other than Demands-Control model of stress, such as the Effort Reward Imbalance model (*"Add questions from the stress model of effort-reward imbalance (Siegrist); focusing on high intrinsic effort and on high 'objective' effort (e.g. long work hours) which are not or not sufficiently rewarded. This model has been shown to account for a variety of stress-related health problems"*, Respondent 21, only participated in Round 2),

- linking the assessment with lifestyle questions and health promotion (*"Lifestyle indicators should be included in the Indicator Tool and the link to health promoting needs"*, Respondent 4)

- avoiding negative connotations or presenting stress as a hazard (*"The use of the term 'risk' […] carries the risk […] of emphasising stress as a hazard and making work seem to be something that should be avoided […]The language needs to be looked at extremely carefully to ensure that the whole process does not become negative"*, Respondent 17),

- limiting the scope of the assessment to available research evidence (*"I would suggest the scope be limited to mental health, MSD, respiratory and cardiovascular as these have some foundation in research evidence and are significant economic problems at the moment"*, Respondent 18), and

- adding questions on available organisational resources for dealing with health problems at work (*"Consider to add a question on "prevention activities" at the workplace (e.g. health promotion)"*, Respondent 21)

4.2.4. Integrating public and occupational health

Question 4 of Round 2 of the study asked experts how public and occupational health can be effectively integrated and whether the Management Standards approach can be used as a vehicle for such integration. The experts were generally supportive of the integration of public health and occupational health and a range of suggestions on how this could be achieved was offered.

Most frequently mentioned was the use of the workplace as "a key venue for public health initiatives" (Respondent 3) (*"Public health professionals could be encouraged to think of the workplace as a distinct vehicle for improving health of the working age population and to work with occupational health professionals to this end. For example, public health campaigns can be promoted through workplace health promotion interventions as appropriate (which can be considered as part of occupational health)"*, Respondent 1). Successful examples were used as illustration (*"In [Country A] the integration is organised via health promoting activities using the workplace as a place for changing not only risk but health adverse behaviour – this model is functioning for all – small and big enterprises*", Respondent 4).

Other suggestions included equipping practitioners with the necessary skills, competencies and knowledge to enable effective integration (*"Theoretically the Standards approach can be used to provide a benchmark of integration between public and occupational health. However, until such time as health systems are adequately integrated (with those involved having the necessary skills and competencies) this is unlikely to be effective. As an example, how can plans to involve GPs more in fitness work issues be effective until GPs (a) have better training in occupational medicine and (b) have some way of acquiring better knowledge about work and work practices where patients are employed – other than replying on what the patients say"*, Respondent 2), increased recognition of the role of job insecurity and uncontrollability as stressors (*"Public OHS surveillance should envisage more the increasing role of insecurity and uncontrollability as powerful psychosocial stressors (effects of restructuring as a continuous task of companies)"*, Respondent 13), and reviewing existing bodies of theory/research/practice relating to public and occupational health (*"There perhaps needs to be a review of the existing bodies of theory/research/practice relating to public and occupational health to examine their commonalities and differences"*, Respondent 1). The role of GPs for implementing the Management Standards and promoting a positive approach was also mentioned in Round 1 of the study (*"Another group I haven't mentioned that I think is important are GP's. Traditionally they have not been overly engaged in work-related illness"*, Interviewee Q).

One of the experts mentioned that in terms of research, public and occupational health are already integrated (*"In the area of research, public and occupational health are in fact already integrated, e.g. the Whitehall studies – due to their scale concern both public and occupational health"*, Respondent 11), whereas two had some reservation about such an integration, due to the fact that many organisations , particularly SMEs, would not be willing to adopt such an agenda due to substantial associated costs (*"I'm not sure that many organisations (particularly SMEs) will be willing to adopt a broader public health agenda, particularly if they feel it is a demand placed on them, which may have associated costs. So including questions in the Indicator Tool for example about access to healthy eating facilities at work, exercise facilities supported at work etc may open a can of worms that organisations would shy away from addressing"*, Respondent 16).

With regard to the possibility of using the Management Standards as a vehicle for such integration, respondents by and large agreed that the Management Standards would be useful in this respect. Many mentioned that the scope should be broadened to include a broader range of health issues and their management (*"If the Management Standards were broadened to include hazards relating to a broader range of health issues, that might provide a model that would facilitate this integration"*, Respondent 1), general health indicators (*"MS could contribute to integration of these areas if they took into account any health indicators, at least subjectively felt health (also: perceived health status)"*, Respondent 11), non-work risk factors and the interaction between work and life domains (*"Individuals with mental problems and/or musculoskeletal problems usually have "risk factors" at work as well as in private life. Moreover, the "risk factors" at work – such as low control or low support – actually also may be operating in private life. Also, it has become clear that the distinction between "life style" and "work environment" is becoming more "fuzzy" since many of the work environment factors influence life style, while life style influences work ability, absence, social exclusion etc […] Modern Management Standards should include a total view of these processes so that one sector does not "export" the problems to the other sector"*, Respondent 5) in order to facilitate the integration more effectively.

4.2.5. Additional resources for organisations

The final question asked experts what additional resources organisations may need to support a Management Standards approach to common health problems at work, in terms of management skills, interventions, occupational health advice and guidance, and so on.

A variety of additional resources were suggested. Advice and guidance was the most frequently mentioned, including guidance on conducting interventions and successfully implementing the

Management Standards (*"Additional resources might include guides on selected techniques aimed at improving working conditions and meeting MS"*, Respondent 11).

A few experts noted that professional advice and guidance would be particularly helpful to SMEs which might lack the skills or expertise necessary for OHS activities (*"SMEs will possess technical expertise as far as their operations and processes are concerned but generally lack the skills necessary to make a full assessment of the hazards involved and their associated risks and to introduce and manage the controls required to eliminate or reduce the risks to a minimum. Apart from management skills, they will need occupational health advice and guidance. There have been examples where the occupational health department of a neighbouring large organisation has been able to offer assistance"*, Respondent 12) and also to organisations where the stress champion does not have a relevant background (*"I think [organisations I work with] would have struggled without expert advice and we might imagine the health service would have an advantage over other sectors. I can't imagine how other sectors, less familiar with the idea of 'stress', 'health' and work characteristics in general have coped with the MS"*, Respondent 3). Attention was also drawn to the usefulness of adopting a user-friendly approach in such guidance (*"Techniques that can be used by persons who do not have specialized psychological knowledge, such as e.g. role clarification, time management, etc. The guide developed within the present workpackage 'How to organise and run focus groups' might be an example of such guides"*, Respondent 11).

In addition to advice and guidance, provision of training and tools was also mentioned. It was considered necessary to provide training for people who would be involved in implementing the Management Standards (e.g. OH/OHS experts, in-house services) (*"Specific offers of education and training of OHS executives in close cooperation with academic training centres"*, Respondent 13). This would ensure that these individuals are aware of important issues (*"It is especially important that OH experts and services are aware of the relevance of the public health issues at the workplace for the employer"*, Respondent 7) and that the standards were applied properly (*"In-house services have to be trained to apply standards in a proper way to gain added value"*, Respondent 4).

Reflecting recommendations from Round 1, experts suggested making available appropriate tools for facilitating the implementation of the MS, and specifically management engagement (*"I like the recent developments in management competencies for reducing stress and perhaps a more user-friendly approach to advising on manager behaviours would help. How about guidance or even a rating scale that managers can use to get feedback on their management style"*, Respondent 3), dialogue between the stakeholders (*"Instruments for dialogue between management and employees such as staff meetings, works councils, OHS committees, employee representatives"*, Respondent 14), as well as progress evaluation (*"Evaluation tools should be offered and analysis tools with different levels of depth and profoundness"*, Respondent 4). Furthermore, evaluation criteria should be constantly monitored and updated to ensure that they are appropriate (*"Standard evaluation criteria should be closely monitored in regard to their appropriateness and consequently modified"*, Respondent 13).

A few experts highlighted the importance of promoting a more accurate view of the Management Standards approach. Emphasis should be placed on their nature and purpose (*"Much of the current Management Standards are merely good organisational practice and require little more than clear and effective promotion. However, the term 'management standards' may be unhelpful as many people (and organisations) may not recognise this as having anything to do with health and instead consider it something more general about management"*, Respondent 6), including the business case (*"Prevention providers have to combine the application of standards with economic arguments"*, Respondent 4), possibly through roadshows and work with key stakeholders.

Finally, suggestions were also made on what organisations themselves could do to support the Management Standards approach to common health problems. This included engagement of resources and top management commitment and involvement (*"If the top management really want this OHSM to succeed - in- and outside of stress management - it need to allocate enough time and*

training and funding for managers to carry out this OHSM […] Top management has to give good opportunities for workers and their unions and reps to influence (and thus mainly to improve) this management", Respondent 10).

4.2.6. Summary of Delphi Round 2 findings

1. Developing a more positive approach

- Develop a broader approach to the management of work-related health
- Focus on general good management
- Place emphasis on the benefits for organisations, organisational learning and promoting healthy organisations
- Place emphasis on corporate social responsibility
- Promote organisations' ownership of the process
- Promote dialogue and close collaboration among the stakeholders
- Occupational health services can play a vital role in such a development; Facilitate the involvement of occupational health and safety professionals in higher-level decision making
- Learn from the organisational change literature
- Promote a change in culture and in attitudes towards the role of work for health, the meaning of health at work, and the management of work-related health
- Place emphasis on the positive aspects of work
- Avoid any negative connotations
- Place stronger emphasis on prevention and a proactive approach
- Develop or make available supplementary assessment tools for positive health outcomes
- Focus on work capacity

2. Optimum organisational size

- The management approach advocated as part of the Management Standards is universal
- The six dimensions are relevant to any organisational size
- Implementation of the approach is problematic for organisations or departments with fewer than 20 to 50 employees
- Anonymity is an issue
- Small sample size can affect the statistical analyses

3. Specific changes suggested

The Management Standards approach:

- Promote consultation and joint discussions between stakeholders
- Examine the empirical research and evidence base supporting such an integration
- Tailor the process to particular health concerns
- Consider the wider microeconomic drivers for change
- Make a link between occupational and public health
- Make a link between good management and good business
- Allow for or promote flexibility in applying the Management Standards approach
- Avoid negative connotations
- Assess and incorporate the work-home life interface

The Indicator Tool:

- Incorporate additional scales or variables or develop additional assessment tools (which are evidence-based and psychometrically valid)
- Re-examine the items included in the Indicator Tool
- Add questions on job insecurity
- Consider or acknowledge alternative theories on work-related stress
- Include questions on lifestyle and health promotion
- Avoid negative connotations
- Limit the scope of assessment to the research evidence
- Include questions on organisational resources

4. Integrating public and occupational health
▪ The workplace is seen as "a key venue for public health initiatives" ▪ Equip practitioners with necessary skills, competencies and knowledge ▪ Acknowledge the role of job insecurity and uncontrollability as stressors ▪ Review existing bodies of theory and practice relating to public and occupational health ▪ In terms of research, public and occupational health are already integrated ▪ General Practitioners can play a role in integrating public and occupational health ▪ Include a broader range of health issues and their management, general health indicators, non-work risk factors, and the work-home life interface
5. Additional resources for organisations
▪ Provide advice and on implementing the Management Standards and interventions ▪ Provide professional advice and guidance (especially for SMEs) ▪ Provide training and tools ▪ Develop additional tools for facilitating management engagement, dialogue between stakeholders, and progress evaluation ▪ Monitor and update evaluation criteria ▪ Promote an accurate view of the Management Standards approach (nature, purpose, and the business case) ▪ Within organisations: engage available resources and facilitate the commitment of top management

5. DISCUSSION

This study provides insight into the Health & Safety Executive's Management Standards approach to work-related stress, its principles and application, and, most importantly, its potential for addressing other common health problems at work. Its main objective was to provide answers to the question "*can the Management Standards approach be used more widely to address the most common health problems at work?"* Answers to this question can potentially provide evidence and arguments, and identify development needs for a more unified framework for the management of health at work.

The views of experts in occupational health in the UK and Europe were harvested using a Delphi methodology through two rounds of consultation. This section provides a summary of and commentary on the findings and identifies possible future actions.

5.1. Understanding the Management Standards approach: A note on the Delphi Panel

The Delphi panel offered a constructive criticism of the Management Standards approach and of the Health & Safety Executive's strategy for managing work-related health. Where opinion was offered, this was based on experience and was largely impartial; where recommendations were suggested, these were constructive.

Although the panel was chosen for its active involvement in occupational health and in health and safety, and recognised expertise in those areas, a few panellists appeared somewhat unclear on the nature and development of the Management Standards approach, on its purpose and use. Similarly, some were not aware of the research that supported the development of the Management Standards approach (for example, Cox et al, 2000; Cox et al, 2002; Cox, Griffiths & Randall, 2003; Mackay et al, 2004), of the Health & Safety Executive's work on management competencies for preventing and reducing stress at work (Yarker *et al.*, 2007; Yarker *et al.*, 2008) or of existing but unpublished evaluations of the Management Standards approach as applied in organisations (Cox *et al.*, 2007; Broughton & Tyers, 2008). Most panel members were willing to acknowledge the limitations of their knowledge and experience and to desist from answering questions that would be affected by it.

This lack of understanding on the part of a few of the experts, seemed to reflect (i) differences in professional background and in their degree of involvement with the Management Standards approach, (ii) the fact that different versions of the approach have been released during its overall history, and (iii) a lack of clarity on the part of the Health & Safety Executive of the nature and purpose of the Management Standards approach. Despite some lack of understanding on the part a minority of the experts, the information and opinions harvested from the Delphi panel on both rounds of consultation were well-articulated, informed and constructive.

5.2. Commentary on the Delphi results

Overall, the Delphi panel welcomed the introduction of the Management Standards approach believing that it was a necessary and useful step forward for dealing with work-related stress. It was seen as a good framework with the potential to reduce stress at work and deliver a healthier work places and organisations through improved work and organisation design and better management practice. The risk management *principles* on which the approach was based was seen as one of its major strengths. Furthermore, in this respect, Britain was seen as providing a lead for many other European countries. However, the *practice* of the framework was seen as in need of important improvements.

Most members of the Delphi panel believed that the Management Standards approach could and should be broadened to deal with other common health problems at work. Indeed, several experts cited its sole focus on work-related stress as a weakness. At the same time, the Delphi Panel saw the weaknesses of the current approach and was able to articulate these criticisms. It was also able to identify the development issues that might challenge the Health & Safety Executive in broadening out the approach to deal with common health problems at work other than work-related stress. These issues are discussed in more detail below.

5.2.1. The current Management Standards approach

The Delphi Panel praised the Management Standards approach for providing a simple, useful and innovative framework to organisations for dealing with work-related stress. However, it was also felt that practical problems relating to its implementation prevent organisations from realising its full potential and the Health & Safety Executive from readily translating it for the management of other common health problems at work. Comments on the strengths and weaknesses of the Management Standards approach centred either on the approach and overall process or on the Indicator Tool.

It should be noted here that the implementation of the Management Standards approach by organisations has been examined in detail by Mellor and Hollingdale (2005), Cox and his colleagues (2007b) and Broughton and Tyers (2008). This study builds on that research. The Delphi panel's views combined the experiences of those responsible for implementing the approach in organisations not only with those of subject matter experts but also with those of policy makers (broadly defined). Taken in conjunction with the Cox *et al.* (2007) study, the current Delphi study provides a more comprehensive perspective on the Management Standards approach and its potential for managing work-related health.

The Delphi panel felt that the strengths of the current approach lay in its simplicity, ease of use, and the fact that it was inexpensive to implement. These attributes made it accessible to the designated user population. However, at the same time, concern was voiced that these very attributes might also serve to make it appear too simple and of impoverished validity. For many the Management Standards approach was merely the application of "another questionnaire" (the Indicator Tool) and this possibly detracted from its potential to improve the healthiness of workplaces and organisations.

The Management Standards approach was generally viewed as a systematic and methodical way for addressing health problems at work, consistent with the principles of good management. As such, although focusing on work-related stress, it has potential indirect effects on other aspects of work-related health, and on linking the management of work-related health with good management. The key consensus recommendation by the Delphi panel for adopting a broader approach to the management of work-related health was based on this view. Such a broader approach would incorporate the management of risk for work-related health with promoting health-enhancing aspects of work, it would not distinguish between stress and other work-related health problems, and it would have an element of corporate social accountability in relation to work-related health.

The more substantive criticisms of the current approach have been described in the earlier sections of this report: the review of existing knowledge and the results of the Delphi exercise. There was a good consensus among the Delphi Panel and between that panel and the literature on the shortcomings of the current approach. The key criticisms were focused on: the implementation strategy adopted by the Health & Safety Executive, the centrality of the Indicator Tool and difficulties in its development, and the lack of clarity over the use of the approach and the amount of support offered to organisations.

Some researchers have, in the literature, questioned the underlying evidence linking work design and management to employee health outcomes. There was a belief by several of the Delphi panellists that the approach had been introduced too soon in terms of the available evidence for its effectiveness.

Many recommended further research into different aspects of the MS evidence base, including the list of antecedents of common work-related health problems, the effectiveness of the approach and its implementation, and the psychometric properties of the assessment tool(s).
In addition, it was felt that a population-based approach to the implementation of the Management Standards approach was not advisable, as risk management assumes a more focused strategy working with defined and meaningful groups in relation to organisation structure, function and risk. An approach that does not distinguish among different occupational groups, departments, organisational context and so on, it was felt, assumes that the key risks to employee health were common across levels, jobs, work systems and workplaces. The evidence suggests that this is not true except when a very high level of abstraction is adopted in relation to the description of those risks. In the words of Lennart Levi "one size does not fit all". Therefore, it was felt that a useful overall work-related health management approach should be maintained, but with enough flexibility for tailoring the process (including assessment, implementation and management) to organisational needs.

Although not intended by the Health & Safety Executive, many believe that the use of the Indicator Tool is the central and important feature of the Management Standards approach and this belief, translated into practice, detracts from the overall process and, particularly, from actions to reduce or ameliorate risk. Possibly, the Health & Safety Executive has not been clear and firm enough in its marketing of the Management Standards approach to allow this to happen. However, this unhelpful belief has also been fostered by the rapid development of a consultancy industry built around the management of work stress in organisations. This has largely been dependent on the development and application of questionnaire-based surveys focused on describing the potentially stressful work situation. An additional concern here has been the introduction of measures of individual difference, such as personality, which both shift responsibility for dealing with work-related stress towards the individual and away from the organisation, and generally detract from the legislative purpose and strength of the Management Standards approach. This concern was especially prominent in expressed views against the use of the Management Standards approach for purposes other than the one it was originally intended, such as rehabilitation and return to work.

The development of the Indicator Tool also attracted criticism, although mainly of a technical nature. The point was made by several experts (see above) that given an apparent lack of evidence of its effectiveness, the Indicator Tool was brought into use too early and on the basis of limited evidence on the relationship between work characteristics and harm. However, decisions to "go" in relation to the introduction of any new measure are naturally subject to contradictory criticisms of "too early" and "too late". Many organisations were looking towards the Health & Safety Executive for technical assistance in the early 1990s.

Some of the technical criticisms, however, open up or relate to other wider issues. For example, some of the Delphi panel questioned the structure of the assessment model underlying the Indicator Tool (the six key domains or dimensions of work) and some questioned the use of a particular work stress theory in shaping that model. The concern is the potential flexibility of the model in the light of future real world and theoretical change. This, in turn, raises the important question of equivalence of measures now and in the future. Possibly, it was suggested, the assessment model needs to be empirically driven, atheoretical, and under ongoing revision. This strategy would make sense if the emphasis is on an appropriate and satisfactory risk assessment and not on the use of the (current) Indicator Tool and associated model. Of course, this would only work if there was a clearly stated and accepted principle of equivalence across different assessment tools and models. This would need to be supported by two things: first, a recognised set of competencies for the development of such assessment tools and models and, second, an approvals (validation) process. Both could be managed with a light touch.

A substantive set of criticisms were voiced about the scope of the assessment model (and the Indicator Tool on which it was based). Three things were felt by the Panel to be missing: (i) coverage of important organisational issues and of those at the interface of the organisation and the employee, (ii) a way of balancing the impact of positive work features against those that were risks, and (iii) an

economic perspective (the bottom line). Examples of the former set of omissions were organisational culture, organisational strategy, employee appraisals and constructs such as the psychological contract between the organisations and its employees (trust, etc). The question of a more positive approach to MS was frequently raised but was often difficult to interpret and operationalise. In particular, it did not appear to mean the pursuit of happiness rather than health nor did it mean a retreat from a risk management approach towards organisational and management development. On discussion and further reflection, the concern appeared to be a perceived need to move away from an exclusive negativity vested in the current risk management approach to make it more appealing to organisations. This, it was suggested, might be achieved by capitalising on the nature of most psychosocial risks – that they, unlike many more tangible risks, are often bipolar. This opens up an opportunity to balance out the negative effects of certain work features on employee health by their positive effects or by the positive effects of other features. Finally, there was concern that an economic perspective had to be introduced into the Management Standards approach to reflect the current reality of work and work organisations. However, this view was balanced out by an equally strong concern that economic considerations might subvert the fundamental principles on which occupational health and health and safety were built. There is some evidence that this is already occurring in certain sectors such as the railways (RSSB, 2005).

The issues and challenges surrounding the development and use of the Indicator Tool would not be so important if it were not seen by many users as the key, and sometimes only, component of the Management Standards approach. This shortcoming has to be addressed with some urgency if the full utility of the approach is to be realised politically and in terms of the development of healthier workplaces and organisations.

The implementation of the Management Standards approach in small and micro enterprises was discussed. Some members of the Delphi panel expressed the view that organisational size is not a relevant issue in terms of implementing the process. However, when explored in more detail, a number of concerns emerged with regards small and micro organisations. A more flexible Management Standards process was suggested that could allow for tailoring and adjusting the implementation process and its tools to the context and requirements of small and micro organisations. Key issues were the perceived vulnerability of staff in completing the risk assessment and in discussing risk reduction interventions and, also, the validity and reliability of the assessment tool when used with small numbers of staff. It was also evident that small and micro organisations would have resource problems in implementing the overall approach and would need extra support over larger organisations. At the same time, there was also a perceived need to protect small and micro organisations from the fast developing consultancy industry in this area.

Finally, there was criticism of the limited amount of support offered by the Health & Safety Executive for the introduction of the Management Standards approach and the plan to phase out what was initially offered with a new focus on web-based support. It was widely felt that doing this would be counter-productive. It was suggested that broadening out the scope of the Management Standards approach to address other common health problems at work might provide a strong argument for maintaining or increasing the amount of support available. One particularly necessary feature of support identified was the need for the education not only of users but also of those experts who support the user community and drive the underlying science. It is clear that not all were “on side” in terms of their understanding and their attitude to the Management Standards approach. Some appeared to understand the intended nature of the approach better than others. For example, with respect to the intended use and development of the approach, a focus on the psychometrics and on individual rather than workplace health, its use in rehabilitation and the return to work of individuals, and in a general scepticism of its importance in the medical community.

Many of the criticisms provided a useful commentary on “work-in-progress” and may be resolved with the continuing development of the Management Standards approach. The criticisms largely applied to the Management Standards approach in general, whether related to work-related stress or extended to cover other common health problems.

5.2.2. Broadening its future use: Common health problems

The Delphi panel identified the two main work-related health problems as musculoskeletal disorders and mental health problems, as consistent with the available epidemiological evidence. It was clear that both "problems" represented clusters of related disorders and that "mental health problems" included work stress, burnout, anxiety and depression. For many, this cluster was defined by the term "work stress".

The Delphi panel also cited other conditions as being problems at work. These fell into three groups: chronic problems, such as cardiovascular and cardiopulmonary disorders, reactive and allergic responses, and non specific symptoms. Again, this "expert" categorisation of health problems at work reflects the available epidemiological evidence; where there were any discrepancies these were thought to reflect the difference between data from sample-based, self-report and clinical experience of individual practitioners.

There was a strong consensus that the Management Standards approach could be used to address, at least, the two most common health problems at work; that is broadened in application to address musculoskeletal disorders as well as work-related stress and related mental health problems. Indeed, some criticism of current practice was offered by members of the expert panel in terms of the MS approach not being used in this broader way. There appeared to be two slightly different ways in which the approach might be developed for broader use. First, it could be used close to its present form where there was a significant contribution of work and organisational factors to the aetiology of the health outcome of interest. It was recognised that further work on the approach would be necessary. Second, the overall process could be applied to all common health problems at work regardless of the contribution made by work and organisational factors; here the emphasis was on the risk management process – as evidence-based problem solving – rather than on the Indicator Tool and the associated assessment model.

The Delphi Panel was challenged as to how the Management Standards approach might be developed to overcome its current weaknesses, and to allow its effective use with other common health problems at work. Some of the suggestions in the second consultation round replicate those offered in the first consultation. One of the main issues that emerged was that whatever form the development of the MS for common health problems takes, it should be based on the evidence underlying the causes of different types of health problems, their management, and the development of assessment and implementation tools. It was also acknowledged that although welcome, such and expansion (i) was also likely to create complexity, which should be avoided and (ii) would have to be supported by parallel developments in the skills base for implementing a new Management Standards approach. A range of specific suggestions on how this can be achieved, many of them of a more technical nature, were offered in both consultation rounds.

5.3. Development needs

The development needs identified by the Delphi panel are discussed in three groups: those that reflect criticisms of the current approach, particularly the strategy used and the nature and use of the Indicator Tool, issues arising from the adaptation of the current approach to apply to other common health problems at work, and particular issues and challenges to the use of this approach including the need for more education, marketing and support for users.

A number of development needs emerge, most of which would address more than one of the issues identified in the body of this report. Comments related to improving the current approach are essentially important for broadening the approach to common health problems. Table 3 presents an outline of the 15 developments needs identified in the Delphi study and supported by the relevant literature.

Need to:	Improving the current Management Standards approach	Developing the approach for other common health problems
Overcoming current weaknesses:		
16. Incorporate higher level organisational factors in the assessment model and Indicator Tool	(X)	X
17. Modify risk model to allow for the "balancing out" of positive and negative drivers of employee health	X	
18. Provide further evidence of the validity and reliability of the Indicator Tool and risk management process	X	(X)
19. Develop a more flexible approach to allow tailoring to specific contexts	X	(X)
20. Address the issue of equivalence in relation to assessment tools and processes	X	(X)
21. Provide a more comprehensive "toolbox" to support all aspects of the Management Standards approach (particularly the translation of the risk assessment information into interventions and the implementation of those interventions)	X	X
22. Clarify the use of the approach in terms of organisational populations vs. targeted at risk groups	X	
23. Develop the business case providing economic arguments for managing stress and other common health problems through the Management Standards approach	X	(X)
24. Educate and provide more support for both users and experts	X	
Broadening out the approach:		
25. Develop a more modular approach to the Management Standards to allow it to address both those work and organisational factors common to different health conditions and those specific to particular conditions	(X)	X
Challenges:		
26. Develop a set of competencies for those using the Management Standards approach and some mechanism for "approving" those competencies		X
27. Develop more supportive compliance and enforcement regimes for users	(X)	X
28. Develop the approach for use in small and micro organisations	X	X
29. Carefully examine the validity of using the Management Standards on an individual basis as in rehabilitation and return to work (including the legal position)	X	X
30. Examine the usefulness of using the approach with public health issues through workplace action		X

Table 3. Summary of development needs identified through the present Delphi study and the literature

5.3.1. Overcoming current weaknesses

Incorporate higher level organisational factors in the assessment model and Indicator Tool

It was widely felt that the assessment model was too focussed at the level of the workplace and design and management of work. There is a widely perceived need to incorporate higher order organisational factors in the model and in the Indicator Tool. Issues relating to organisational structure, function and strategy as well as culture were mentioned. Attention might be paid to management style and practice and to issues relating to the psychological contract between the organisation and its employees.

Modify risk model to allow for the "balancing out" of positive and negative drivers of employee health

There is a need to develop what would be perceived as a more positive approach to risk management. This could be done by modifying the risk model to allow for the balancing out of positive (salutogenic) and negative (risk) drivers of employee health in the assessment and intervention stages of the Management Standards approach. This is made possible by the bipolar nature of many work and organisational factors and the way that they are known to interact.

Provide further evidence of the validity and reliability of the Indicator Tool and risk management process

The Health & Safety Executive should continue to encourage and support research into the reliability and validity of the Indicator Tool (and equivalent assessment instruments and procedures) and the usefulness of the overall risk management approach. It should also encourage the harvesting and dissemination of the findings from this research.

This research may include the nature of the assessment model (and the Management Standards), the associated norms, the psychometric properties of the Indicator Tool, and evidence for the effectiveness of the Management Standards approach in relation to employee health and performance.

The Health & Safety Executive should make better and wider spread use of the existing evidence for the reliability, validity and usefulness of the Management Standards approach.

Develop a more flexible approach to allow tailoring to specific contexts

There is a need to clarify what is and is not acceptable in terms of the flexibity of the Management Standards approach especially in relation to different contexts and measures. One particular example is that of the different demand characteristics of large, medium size, small and micro organisations. Other issues relating to flexibility are discussed below in terms of equivalence and the need for a more modular approach.

Address the issue of equivalence in relation to assessment tools and processes

There is a need to consider whether the Management Standards approach is to be the only approved approach in law or whether other "equivalent" approaches will be acceptable. This is the issue of equivalence. There are, at least, two issues. First, is the Management Standards approach robust enough to be useful in all situations across a wide range of diverse sectors, organisations and work groups and systems and workplaces? Can other risk management procedures be developed for more specific usage? Second, where such procedures exist and are being used (largely by large organisations), are they to be abandoned?

Provide a more comprehensive "toolbox" to support all aspects of the Management Standards approach (particularly the translation of the risk assessment information into interventions and the implementation of those interventions)

There is a need to provide more information on the way in which the information gained through the risk assessment can be translated into an intervention plan and on how interventions can be implemented and evaluated. Such action may also redress the perceived imbalance between risk assessment ~ the use of the Indicator Tool ~ and risk reduction.

Clarify the use of the approach in terms of organisational populations *vs* defined at risk groups

There is a need for the Health & Safety Executive to clarify the strategy by which the Management Standards approach should be used in organisations. The central question is whether it should be applied to the whole organisational population (public health or population based approach) or to define "at risk" groups (occupational health approach). Some consideration should be given here to the wider debate on the strengths and weaknesses of the two approaches in the organisational (occupational) context and to the nature of the relationships between exposure to work and organisational factors and employee health.

Develop the business case providing economic arguments for managing stress and other common health problems through the Management Standards approach

Recognising the necessity to take account of the economic context for occupational health, there is a need to develop a more sophisticated business case to support the use of the Management Standards approach for work-related stress and for other common health problems at work. This may require the Health & Safety Executive to initiate and otherwise encourage more research in this area.

Educate and provide more support for both users and experts

There is a need to provide more educational support and advice and more practical support for not only users of the Management Standards approach but also fort he experts who support them. This will require greater clarity from the Health & Safety Executive in relation to the nature, purpose and use of the approach.

5.3.2. Broadening out the approach

Develop a more modular approach to the Management Standards to allow it to address both those work and organisational factors common to different health conditions and those specific to particular conditions

If the Management Standards approach is to be broadened out to address other common health problems at work, then there may be a need to develop a more modular structure to risk management. This might involve developing modules to address the work and organisational factors that are shared antecedents of the health problems under consideration and other modules to address those that are specific to particular health problems. This strategy might also allow the Management Standards approach to be "tailored" to specific contexts – sectors, organisations, work groups and systems and workplaces – as argued earlier in relation to flexibility and equivalence.

5.3.3. Challenges

Develop a set of competencies for those using the Management Standards approach and some mechanism for "approving" those competencies

There is a need to establish the competencies required of users of the Management Standards approach and with particular reference to the use of the assessment tool and the organisational development which may follow. The Indicator Tool is a psychometric instrument not dissimilar to those that are elsewhere professionally regulated in terms of their usage. Similarly, there are competency schemes in existence elsewhere in relation to organisational development, work systems design and management development, workplace design and ergonomics. An integrated scheme needs to be developed, at an elementary level, for the developed of in-house organisational staff. Such competency schemes also require some mechanism for establishing and approving their validity and the competence of individuals within such schemes.

Develop more supportive compliance and enforcement regimes for users

Given the "newness" of the Management Standards approach, and of the notion of assessing and managing work and organisational factors for employee health, there is a need to consider how compliance and enforcement can be best managed. Traditional enforcement strategies may not be the most useful and a more supportive approach might be indicated. In particular, compliance may be best managed on the basis of a challenge for users to provide evidence of appropriate assessment activities and of appropriate actions to improve employee health through interventions targeted on work and organisational factors. There was no support in the present study for "deregulation".

Develop the approach for use in small and micro organisations

It is recognised by the Delphi panel that small and micro organisations are not simply scaled down large and medium size organisations and that they have their own demand characteristics. Furthermore, there are several important issues that the use of the Management Standards approach raises for small and micro organisations. Therefore, there is a need for further development work on the nature and application of the approach within such organisations. Alternatives for engaging small organisations in health and safety management have been examined by Institution for Occupational Safety and Health (2006: "Workplace Health Connect2). This work needs to be extended.

Carefully examine the validity of using the Management Standards on an individual basis as in rehabilitation and return to work (including the legal position)

There has been some argument for the use of the Management Standards approach with individuals and especially in relation to rehabilitation regimes and return to work (see, for example, Price 2006). This needs to be considered carefully from two points of view. First, the approach was not developed for use with individuals in this way and there is little or no scientific evidence which would support that use. Second, because the approach was developed explicitly for another purpose and at the organisational level, its use with individuals might not be defensible in court of law. This might be particularly so with regards the use of the Indicator Tool. The Health & Safety Executive needs to consider this issue carefully and, arguably, not be seen to endorse its usage outside its original and declared purpose. However, it also needs to keep a watching brief and evaluate any reported usage with individuals to answer the question "could it be fit for this purpose".

Examine the usefulness of using the approach with public health issues through workplace action

The Management Standards approach was developed to address issues of work-related health. However, in so far as work may be a major determinant of general health, there is a need to consider if workplace action through the Management Standards approach can be of service to improving general (public) health. There is a second and related question of whether, outside of work, the Management Standards approach can be used to address public health issues 9after appropriate modification). This might also be considered.

5.4. Conclusions

The issues raised by the Delphi experts and discussed in this report have some resonance with the general policy literature on the way forward for the management of work-related health. The Black (2008) report and specially research commissioned (PriceWaterhouseCoopers, 2008: "Building the Case for Wellness"; Royal College of Psychiatrists, 2008: "Mental Health and Work"; Peninsula Medical School (2008): "Avoiding long-term incapacity for work: Developing an early intervention in primary care"), the joint strategy of the Health & Safety Executive, Department of Work and Pensions, and Department of Health ("Health, work and well-being – Caring for our future"), the government initiatives "Revitalising Health and Safety" (1999) and "Workplace Health Connect" (2006), to name a few, all show the government's commitment to making a real difference to the health and well-being of working people. Furthermore, the Work Foundation's vision of "good work" (2005) is one that is also inherently linked to "high performance workplaces" as well as to healthy work. The broadening of the Management Standards for work-related health and well-being in this direction is seen as a positive development, and one that presents an opportunity for the Health & Safety Executive to set an example in this area in the UK, in Europe and aboard.

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7. APPENDIX: THE INDICATOR TOOL

JOB CONTENT
Demands Includes issues like workload, work patterns, and the work environment The standard is that: • Employees indicate that they are able to cope with the demands of their jobs; • Systems are in place locally to respond to any individual concerns. What should be happening / states to be achieved: • The organisation provides employees with adequate and achievable demands in relation to the agreed hours of work • People's skills and abilities are matched to the job demands; • Jobs are designed to be within the capabilities of employees; and • Employees' concerns about their work environment are addressed.
Control How much say the person has in the way they do their work The standard is that: • Employees indicate that they are able to have a say about the way they do their work; • Systems are in place locally to respond to any individual concerns. What should be happening / states to be achieved: • Where possible, employees have control over their pace of work; • Employees are encouraged to use their skills and initiative to do their work; • Where possible, employees are encouraged to develop new skills to help them undertake new and challenging pieces of work; • The organisation encourages employees to develop their skills; • Employees have a say over when breaks can be taken; and • Employees are consulted over their work patterns.
Support Includes the encouragement, sponsorship and resources provided by the organisation, line management and colleagues The standard is that: • Employees indicate that they receive adequate information and support from their colleagues and superiors; • Systems are in place locally to respond to any individual concerns. What should be happening / states to be achieved: • The organisation has policies and procedures to adequately support employees; • Systems are in place to enable and encourage managers to support their staff • Systems are in place to enable and encourage employees to support their colleagues; • Employees know what support is available and how and when to access it; • Employees know how to access the required resources to do their job; and • Employees receive regular and constructive feedback.

JOB CONTEXT
Relationship Includes promoting positive working to avoid conflict and dealing with unacceptable behaviour The standard is that: • Employees indicate that they are not subjected to unacceptable behaviours, e.g. bullying at work; • Systems are in place locally to respond to any individual concerns. What should be happening / states to be achieved: • The organisation promotes positive behaviours at work to avoid conflict and ensure fairness; • Employees share information relevant to their work; • The organisation has agreed policies and procedures to prevent or resolve unacceptable behaviour; • Systems are in place to enable and encourage managers to deal with unacceptable behaviour; and • Systems are in place to enable and encourage employees to report unacceptable behaviour.
Role Whether people understand their role within the organisation and whether the organisation ensures that the person does not have conflicting roles The standard is that: • Employees indicate that they understand their role and responsibilities; • Systems are in place locally to respond to any individual concerns. What should be happening / states to be achieved: • The organisation ensures that, as far as possible, the different requirements it places upon employees are compatible; • The organisation provides information to enable employees to understand their role and responsibilities; • The organisation ensures that, as far as possible, the requirements it places upon employees are clear; and • Systems are in place to enable employees to raise concerns about any uncertainties or conflicts they have in their role and responsibilities.
Change How organisational change (large or small) is managed and communicated in the organisation The standard is that: • Employees indicate that the organisation engages them frequently when undergoing an organisational change. • Systems are in place locally to respond to any individual concerns. What should be happening / states to be achieved: • The organisation provides employees with timely information to enable them to understand the reasons for proposed changes; • The organisation ensures adequate employee consultation on changes and provides opportunities for employees to influence proposals; • Employees are aware of the probable impact of any changes to their jobs. If necessary, employees are given training to support any changes in their jobs; • Employees are aware of timetables for changes; • Employees have access to relevant support during changes.

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Developing the management standards approach within the context of common health problems in the workplace

A Delphi Study

The primary objective of the research reported here is to provide evidence, arguments and recommendations in relation to the development of a more unified framework for the Health & Safety Executive's programme on 'Health, Work and Wellbeing'. Essentially, it is to answer the key question 'can the Management Standards approach be used more widely to address the most common health problems at work?' In order to answer this question, a better understanding of the current strengths and weaknesses of the Management Standards approach and its potential had to be developed.

The identified information needs have been addressed using a Delphi methodology, framed by a focussed review of the relevant scientific and professional literatures, to elicit, harvest and explore expert knowledge in this area. The programme of work took six months to complete starting in March 2008 and finishing in September 2008.

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