

Practical tools for managing risks at the workplace

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Introduction

Dear Reader,

This issue of GOHNET deals with the ongoing activities by our collaborators and other institutions around the world with respect to the second objective of the WHO Global Plan of Action on Workers' Health (2008-2017) - 'Promoting and Protecting Health at the Workplace':

www.who.int/gb/ebwha/pdf_files/WHA60/A60_R26-en.pdf

Good risk assessment and management tools can support the creation and maintenance of healthy workplaces. Through the endorsement of the Global Plan, WHO has been requested by its Member States to take a number of actions to supporting countries in achieving the objective of protecting and promoting health, including creating practical tools for assessment and management of occupational

risks, recommending minimum requirements for health protection at the workplace, providing guidance on development of healthy workplaces, and on promoting health at the workplace.

The main focus of this issue is on the development of toolkits. WHO defines toolkits as 'a solutions-oriented strategy applying practical tools for the control of a specific hazard or a specific risk'. Its content and format are based on the best available evidence, supplemented, as necessary, by the practical experience and technical knowledge of experts in the field. Toolkits are designed for use by all stakeholders including employers, workers and their representatives, government representatives in reducing exposures to workplaces hazards as they offer a framework for identifying, assessing, controlling, managing and evaluating such hazards.

Please consider contributing to the next GOHNET issue which will deal with the health of healthcare workers; deadline: 30 November 2009

Other issues:

Workers' Health in other policies; deadline 31 March 2010

Contributions are written for an online Newsletter and you can consult the contributors' information at this location:

http://www.who.int/occupational_health/publications/newsletter/en/oecontribinfoe.pdf

Please send your contributions to the editor

Enjoy your reading!

Evelyn Kortum Editor, ochmail@who.int

Update on the development of the Psychosocial Risk Management Toolkit (PRIMAT)

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Researchers, practitioners, government bodies, social partners and organisations differ in awareness and understanding of new types of challenges in working life such as psychosocial risks and work-related stress (1). Even though in some countries there appears to be widespread awareness of the nature and impact of these issues as well as agreement among stakeholders on their prioritization for the promotion of health, productivity and quality of working life, this situation is not reflected across the WHO member states, especially in the developing countries (2). Concerned that there are major

gaps between and within countries in the exposure of workers and local communities to occupational hazards and in their access to occupational health services, the sixteenth World Health Assembly, in May 2007 endorsed the Global Plan of Action on Workers' Health, 2008–2017 (3). The Global Plan further advocates that the assessment and management of health risks at the workplace should be improved by defining essential interventions and developing practical tools for prevention and control of psychosocial risks in the working environment (3).

This recent development has provided further impetus, to a need identified through the work of the WHO Network of Collaborating Centres (CCs) in Occupational Health in 2004, for practical procedures and tools for the management of occupational health and safety at work with special emphasis on the changing nature of work and new forms of risks that could negatively affect employee health and safety (4). However, the complexity of the aetiology of psychosocial risks and their context-specificity made it difficult for practical, prevention-oriented tools to be developed that could be adaptable and usable to a wide range of enterprises, sectors and countries. A consortium of WHO CCs in Occupational Health supported by the WHO, ILO, other international experts and key stakeholders in occupational health set out to address this challenge.

The idea of the development of a framework for the management of psychosocial risks was born in May 2004 at the WHO Headquarters in Geneva, where the WHO challenged members of the now PRIMA-EF consortium (www.prima-ef.org) to come up with a good practice framework that could in the long run be promoted at the international level. Initial funding to start developing the framework was provided by SALTSA (confederation of Swedish Trade Unions and the then Swedish National Institute of Working Life) (1). It was decided that since substantial knowledge and best practice was already available in the European Union (EU) in relation to the management of psychosocial risks, it would make sense to start building the framework at the EU level and then work to develop it further for use in the international arena (5). Psychosocial Risk Management – European Framework (PRIMA-EF) was funded through the 6th Framework Programme of the European Commission, by DG-Research.

Psychosocial Risk Management – European Framework (PRIMA-EF)

Particular challenges in relation to psychosocial risks and their management exist both at the enterprise level and at the macro level. At the enterprise level there is a need for systematic and effective policies to prevent and control the various psychosocial risks at work, clearly linked to companies' management practices. At the national level, the main challenge is to translate existing policies into effective practice through the provision of tools that will stimulate and support organisations to undertake that challenge, thereby preventing and controlling psychosocial risks in our workplaces and societies alike (1). At both levels, these challenges require a comprehensive framework to address psychosocial risks.

In order to meet these challenges successfully, PRIMA-EF has been built of a review, critical assessment, reconciliation and harmonisation of what exists and has proved valid in the EU for the management of psychosocial risks and the promotion of (mental) health, safety at the workplace, and beyond it. The framework has been built from a theoretical analysis of the risk management process, identifying key elements in logic and philosophy, strategy and procedures, areas and types of measurement, and from a subsequent analysis of typical risk management approaches as used within the EU. It is meant to accommodate all existing (major) psychosocial risk management approaches across the EU (6).

The developed framework was used to examine key issues of relevance to the management of psychosocial risks at work, such as policies, stakeholder perceptions, social dialogue, corporate social responsibility, monitoring and indicators, standards and best practice interventions at different levels. In doing so, the project aimed at identifying the current state of the art in these areas, to develop frameworks of best practice with associated guidance, and to suggest priorities and avenues for improvement (5).

Key elements, concepts and the philosophy underlying a unified European framework for psychosocial risk

Within PRIMA-EF, the concept of equivalence, and allowing diversity, continues throughout the life of the framework. Equivalence allows the overall approach to be tailored to the context in which it is used without losing the opportunity to compare across situations, at one level, and to draw general conclusions at another. In reviewing best practice models for psychosocial risk management across the EU, a number of key concepts can be identified and have been incorporated into PRIMA-EF (7):

a) Good psychosocial risk management is good business: In essence, psychosocial risk management is synonymous to best business practice. As such, best practice in relation to psychosocial risk management essentially reflects best practice in terms of organisational management, learning and development, social responsibility and the promotion of quality of working life and good work.

b) Evidence informed practice: Risk management in health and safety is a systematic, evidence-informed practical problem solving strategy. It starts with the identification of problems and an assessment of the risk that they pose; it then uses that information to suggest ways of reducing that risk at source. Once completed, the risk management actions are evaluated. Evaluation informs the whole process and should lead to a reassessment of the original problem and to broader organisational learning (8). Before a problem can be addressed, it must be analysed and understood, and an assessment made of the risk that it presents to produce a reasoned account of the most important work organisational factors associated with ill-health (broadly defined) for a specific working group and one grounded in evidence (9).

c) Ownership: Psychosocial risk management is an activity that is closely related to how work is organised and carried out. As a consequence, the main actors are always managers and workers who are responsible for the work to be done, in the management process it is very important that managers and workers feel the 'ownership' of the psychosocial risk management process. In relation to ownership by managers it is very important to emphasise the link with good business, e.g. by assessing business benefits besides health benefits, or by developing business cases.

d) Contextualisation and tailoring: Contextualisation, tailoring the approach to its situation, is a necessary part and facilitates its practical impact in workplaces. Because national and workplace contexts differ, contextualisation is always needed to optimise the design of the risk management activities, to guide the process and maximise the validity and benefit of the outcome. Closely related to contextualisation is the concept of tailoring. Tailoring aims to improve the focus, reliability and validity of the risk management process. It improves the utilisation of the results of the risk assessment and the feasibility of the results and helps to make effective action plans.

e) Participative approach and social dialogue: Inclusion of all parties in prevention efforts can reduce barriers to change and increase their effectiveness. Including all actors can also help increase participation and provide the first steps for prevention. Access to all the required information is also facilitated with a participative approach. It is clear that each member of an organisation, and other social actors which surround it, have expert knowledge of their environment (needed for successful tailoring) and the best way to access this is through inclusion. At the policy level, participation is also relevant for the effectiveness and ownership of workers' representatives. Therefore, synergy can be created between good risk management approaches for psychosocial risks on the one hand and social dialogue and dialogue with external stakeholders on the other hand. These dialogues are also important because psychosocial risk management is part of responsible business practices in any organisational context (and transparency and communication are key in any responsible business policy).

f) Multi-causality and identification of key factors: In every day practice, psychosocial risks have many causes. Typically, factors like characteristics of work organisation, work processes, workplace, work-

life balance, team and organisational culture, and societal arrangements (e.g. the provision of occupational health services and social security arrangements) all play a role. Some of these may be very apparent; others may require a good analysis to identify them as underlying causal factors. As a consequence there are usually no quick-fix solutions at hand; a continuous management process is usually required. In order to be effective, it is important to understand the most important underlying causal factors before solutions are selected.

g) Solutions that are fit for purpose: Scientific evidence is important to inform the psychosocial risk management process. However, in its purest form (scientific evidence from randomised clinical trials) it requires research on standardised items, in controlled situations, and involvement of large populations. Knowledge from this kind of research is usually not very practical, especially not for SMEs. It is more important to make the problems in SME practice the starting point for research, and to develop knowledge and solutions that are “fit for purpose”.

h) Different levels of interventions with focus on measures at source: The emphasis should be on primary risk prevention targeted at the organisation as the generator of risk. However, specific actions targeted at the individual level can also play an important role depending on the magnitude and severity of the problem within organisations and its effect on employee health.

i) Ethics: Protecting the psychosocial health of people is not only a legal obligation, but also an ethical issue. As interests between various agents involved differ, their sphere of influence is not always clear. Shifting of consequences from enterprises to individuals or society at large may occur (externalisation). Frequently there are ethical dilemmas that are easily overlooked or that (often implicitly) underlie a seemingly fully rational discussion.

j) Relevance for broader policy agendas: Psychosocial risk management is relevant not only to occupational health and safety policy and practice but also to broader agendas that aim to promote workers' health, quality of working life and innovation and competitiveness. In particular, psychosocial risk management clearly maps onto the World Health Organization (WHO) global plan of action on workers' health and its objectives to: protect and promote health at the workplace through integrated measures to manage psychosocial risks; adopt clear occupational health standards to introduce healthy work practices, work organisation and a health-promoting culture at the workplace; and create practical tools for the assessment and management of occupational risks.

k) Minimum standards: Another key concept is that of minimum standards for psychosocial risk management that can and must be met across EU countries and irrespective of workplace contexts. Here management refers to the management process and its direct outputs (measures taken). Such standards must be rooted in legal requirements and the policy context and best practice principles.

l) Capabilities required: Policies for psychosocial risk management require capabilities at the macro level and at company level respectively. The capabilities required comprise:

- adequate knowledge of the key agents (management and workers, policy makers),
- relevant and reliable information to support decision-making,
- availability of effective and user friendly methods and tools,
- availability of competent supportive structures (experts, consultants, services and institutions, research and development).



Launch of PRIMA-EF, Rome, 3-5 Nov 2008

The psychosocial risk management process and model

a) Enterprise level: The above key concepts and philosophy were translated to a model for the management of psychosocial risks at the enterprise level, as depicted in Figure 1.

Psychosocial risk management incorporates five important elements (10):

- (i) a declared focus on a defined work population, workplace or set of operations
- (ii) an assessment of risks to understand the nature of the problem and their underlying causes
- (iii) the design and implementation of actions designed to remove or reduce risks
- (iv) the evaluation of those actions
- (v) the active and careful management of the process.

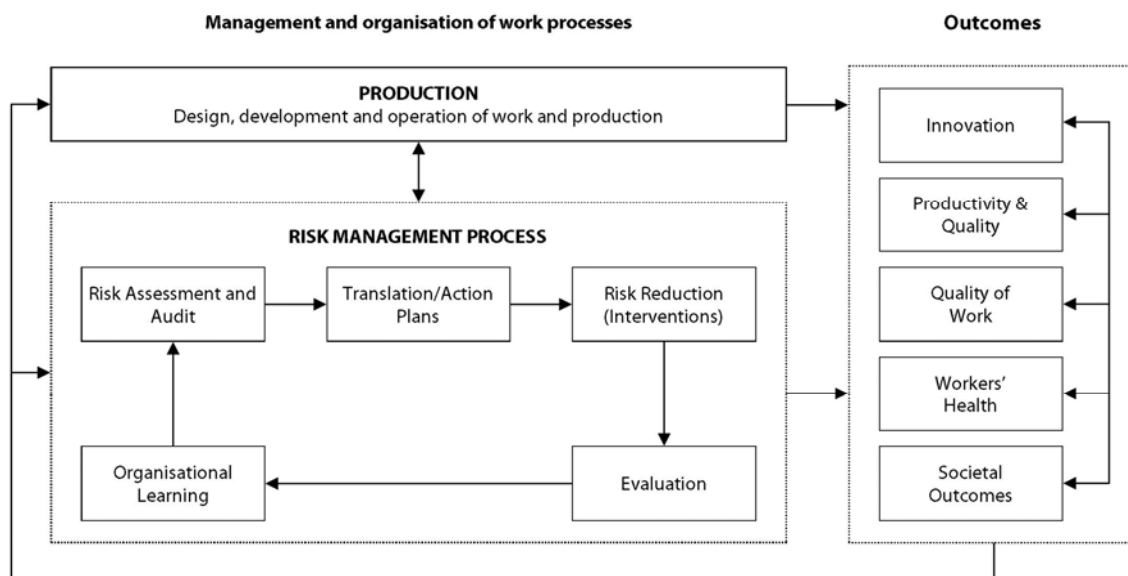


Figure 1: The framework model for the management of psychosocial risks – enterprise level

b) Macro/policy level: As the underlying key principles and philosophy are the same for the risk policy process compared to the risk management process at company level, it comprises similar steps and elements as those at the company level, as depicted in figure 2.

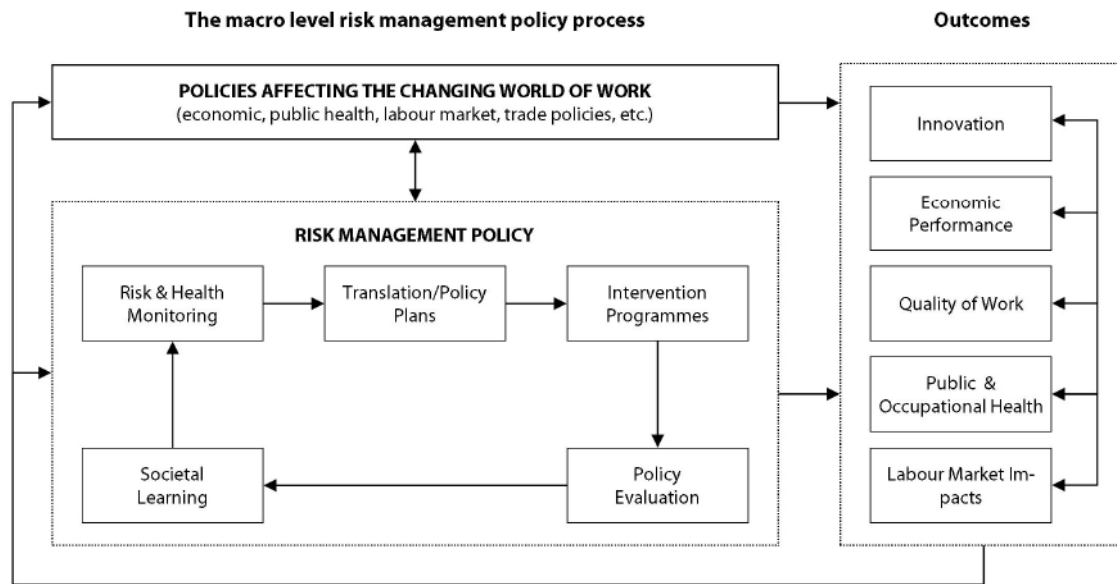


Figure 2: The framework model for the management of psychosocial risks – macro/policy level

The way forward: charting the next steps

Psychosocial hazards require the consideration of social and organizational contexts. PRIMA-EF has resulted in the development of a number of essential tools. These include a set of ten guidance sheets, a WHO guide through the Protecting Workers' Health series, a book and a toolkit of best practice interventions for psychosocial risk management. All outputs are available for free through the PRIMA-EF website (www.prima-ef.org) or the WHO website: http://www.who.int/occupational_health/publications/Protecting_Workers_Health_Series_No_9/en/index.html.

The next step towards the development of the toolkit, involves the development of further tools at the enterprise level, in particular, programmes on psychosocial risk management for all stakeholders, including occupational health and safety professionals and health and safety inspectors. Training courses on PRIMA-EF will be developed and delivered initially to parties across the EU, and further adapted for a global audience, specifically to address the needs of developing and newly industrialized countries (2). This could be facilitated by the establishment of a network of excellence in psychosocial risk management. Initial funding for the development of the training tools has been received from the European Commission's Leonardo da Vinci programme.

Future activities focus on the development and evaluation of tools and initiatives at the policy level, and the development of a standard for psychosocial risk management.

http://www.who.int/occupational_health/publications/Protecting_Workers_Health_Series_No_9/en/index.html

and the project website:

PRIMA-EF book: <http://prima-ef.org/Documents/PRIMA-EF%20eBOOK.pdf>

PRIMA-EF guide: http://prima-ef.org/Documents/PRIMA-EF%20BROCHURE_English.pdf

guidance sheets: <http://prima-ef.org/Documents/01.pdf>

<http://prima-ef.org/Documents/02.pdf>

<http://prima-ef.org/Documents/03.pdf>

<http://prima-ef.org/Documents/04.pdf>

<http://prima-ef.org/Documents/05.pdf>

<http://prima-ef.org/Documents/06.pdf>

<http://prima-ef.org/Documents/07.pdf>

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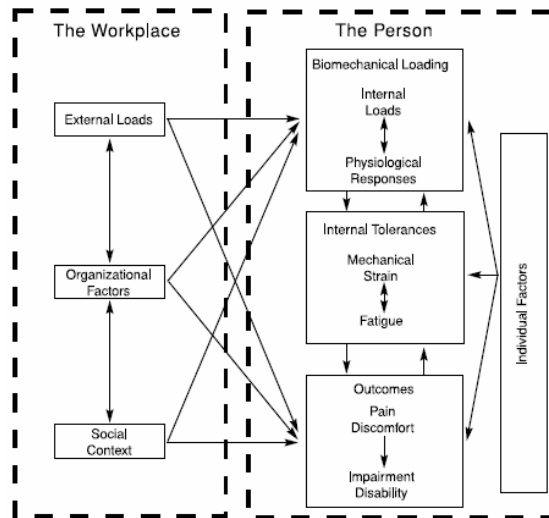
Progress towards developing a toolkit to manage the risk of work-related musculoskeletal disorders

Wendy Macdonald, La Trobe University, Australia

Management of the risk of work-related musculoskeletal disorders (MSDs) continues to present a major OH challenge in many countries throughout the world. To a large extent, difficulty in managing MSD risk is due to the extremely large set of workplace hazards that affect it, as depicted in Figure 1.



Figure 1. A model of hazards affecting risk of work-related musculoskeletal disorders. (National Research Council and Institute of Medicine, 2001).



To decide how best to meet this challenge, particularly in regions where access to expert assistance is generally unavailable, a special meeting was held in August, during the 17th World Congress of the International Ergonomics Association (IEA) in Beijing, China. This meeting was convened by the IEA Technical Committee on Musculoskeletal Disorders. It was part of a process that had been initiated several years earlier by a suggestion to the IEA that they might develop and apply a *control banding* approach to managing MSD risk. Control banding is a qualitative risk assessment and management strategy that categorises levels of risk related to a particular kind of hazard – typically a hazardous chemical – into ‘control bands’ (CDC NIOSH, 2009). The International Occupational Hygiene Association (IOHA) has been instrumental in developing and applying this method, and since both the IEA and IOHA are partner NGOs within the WHO network, they established a joint project as part of the network’s 2006-2010 work plan.

Prior to the Beijing meeting in August 2009, discussions within the IEA focused on how it might be possible to apply ‘control banding’ to reduce MSD risk. It soon became evident that this risk is very different from those usually targeted by control banding. When risk stems from exposure to a hazardous chemical or other such substance, the *source* of the risk (that is, the hazardous substance) is reasonably clearcut and a ‘control banding’ approach to risk management is clearly appropriate. However, its application to managing risks such as that of MSDs, where there is a diverse range of interacting hazards was strongly questioned by experts in MSD risk management within the IEA.

In the meantime, the WHO network of Collaborating Centres in Occupational Health agreed that a high priority should be placed on developing and implementing practical “toolkits” to help in assessing and managing particular risks to workers’ occupational health. The concept of a toolkit encompasses the control banding approach but is broader, making it applicable to managing all kinds of OH risk. WHO is working to identify existing toolkits and other ‘simple solution’ approaches to manage chemical, physical, psycho-social, MSD, and sector-specific risks, especially for low resource countries. Accordingly, the focus of the Beijing meeting during the IEA Congress was on how the IEA might develop a toolkit for managing work-related MSD risk.

The meeting commenced with a presentation prepared by Evelyn Kortum of the WHO, which was presented on her behalf by the retiring IEA President, Professor David Caple. This explained the WHO’s toolkits concept and noted that while control banding is clearly appropriate for managing

'traditional' risks such as those arising from exposure to hazardous chemicals, a different approach is needed to manage risks for which there are multiple, complex hazards as in the case of both musculoskeletal and psychological injuries. Following this presentation, Professor Enrico Occipinti provided an overview of existing types of MSD risk management tools, illustrated by a presentation on the OCRA method, and there was then a round table discussion with approximately 25 interested delegates.

It was agreed that to manage risks such as MSDs which arise from diverse sets of interacting hazards, prescriptive guidance focusing on risk due to *single* hazards, independent of their relationships with other relevant hazards, are of little value. Rather, the importance of 'participative ergonomics' approaches to risk management was strongly emphasised, whereby workers themselves play a crucial role in the processes of hazard identification, risk assessment, identification and evaluation of potential control measures and implementation of agreed changes.

Importantly, the meeting decided to support two sets of actions as the initial steps in producing a toolkit according to the WHO model. First, existing models of work-related determinants of MSD risk, such as that in Figure 1, will be reviewed. Outcomes of the Prima-EF project on psychosocial hazard management will also be considered, as part of the broader process of establishing a comprehensive conceptual framework for MSD risk management as needed to underpin development of the proposed toolkit.

A second, parallel activity will entail collation and review of existing MSD risk assessment procedures that may be suitable for non-expert users, taking account of current European work to trial one such tool developed in The Netherlands. It was further agreed that trialling of proposed tools in a variety of different environments will be essential, and several future options for this were suggested, including an offer from Ms Sudthida Krungkraiwong from Thailand's National Institute for Improvement of Working Conditions and the Environment to help organise trials in that region. The coordinator of these various actions will be Dr Wendy Macdonald on behalf of the IEA MSDs Technical Committee

Based on these decisions, a new project will be submitted for inclusion in the 2009-2012 workplan of the WHO network of Collaborating Centres. It will be part of GPA Objective 2 under the priority to *develop practical toolkits for the assessment and management of OH risks*. The technical person responsible for this project is myself and the WHO officer responsible is Evelyn Kortum.

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Practical Primary Prevention: Control Banding toolkits and the art of qualitative risk assessment

David Zalk, IOHA

In the world of Occupational Hygiene, where quantification is historically king, the foundation of what is considered state-of-the-art can be perceived as changing. Europe is learning cutting edge lessons from India and the United



States is being educated by Chile. Control Banding (CB) is behind this change, with its toolkits presenting simplified strategies for controlling work-related exposures and its qualitative risk assessment approaches beginning to redefine occupational risk management (ORM). I first began working with CB in 1998 when Paul Oldershaw, the elder statesman of the UK HSE COSHH Essentials, was trying to 'expose' the world of Occupational Exposure Limit (OEL) setting to an approach for Occupational Hygienists when OELs were not available. My work since has been a journey of watching CB blossom in over 25 countries and being amazingly fortunate to play a part in its expansion to the occupational safety, health, and hygiene (OSHH) professions. My experiences culminated at the 5th International CB Workshop (ICBW) in Cape Town, South Africa in 2009. There a presentation asked what was an unthinkable question in 1998; can CB be better than traditional Occupational Hygiene?



Within the essence of this question is the art of qualitative risk assessment. Although some CB toolkits have been argued to be semi-quantitative, the recent logarithmic growth of CB is truly focused on the qualitative. The CB International Technical Group (ITG) was formed after the first ICBW held in London. The ITG developed a work plan at the 2nd ICBW in Cincinnati for the growth of CB that sought to balance expansion of toolkits with their validation and verification. Prior to the 5th ICBW the ITG reviewed the 5 year work plan outlining successes, failures, and lessons learned. Successes included the expansion of CB range, beginning as a bulk liquid and solid toolkit focusing narrowly at manufacturing processes, into more broad

scale toolkits for point source chemical exposures, ergonomics, psychosocial, and even delving into safety-based injury prevention toolkits. Very impressive was the long list of publications that aided the focus of ITG's work plan. One of the primary goals, however, was not realized. This was the concept of bringing together multiple toolkits into a singular ORM Toolbox that would cover all OSHH professional considerations to reduce the risk of injury and illness within a singular sector.

The good news is that an ORM Toolbox manuscript is now being developed for the construction industry which is not only global in its design, but the team developing it is also international in scale. Additionally, the ITG work plan for the next 5 years is also near completion and its goals are extremely high. The extensive vision for this work plan is essential as its overarching intent is as majestic as it is noble; to afford reduction to the extensive occupational risks facing the 90 – 95% of the nearly 4 billion workers in the world that will otherwise never receive the services of the OSHH professions.

In my opinion, to begin addressing this vision's end it is essential to keep the means of developing toolkits as simplified as possible. For the majority of the toolkits that I have been fortunate be a part of developing, assisting, or assessing, the art of qualitative risk assessment is quite basic. A hazard is presented, the level of risk is stratified to a minimal number of components, and controls commensurate to each risk level is the intended output. Determining the number of risk levels, or 'bands', is a result of balancing the intricacy of the hazard with the needs of the worker. Throughout this process, keeping in mind that the worker is our end-user is often the most difficult to remember.

Theoretically, for the worker, there should be only two risk levels; red and green. Having three risk levels, red-yellow-green if you will, has been found in practice to have its limitations with the middle, yellow option leading to inappropriate outcomes as it can cover a wide range of options. Therefore, the classic CB delineation of 'bands' tends towards four as it essentially divides the yellow into a better

decision matrix to ensure the commensurate controls are in place. In the end its all about scaling prevention to a given situation in a toolkit designed to be seen as a complement to the OSHH professions, rather than a replacement. The more difficult a toolkit is perceived to be in its consideration phase, the less likely it is to make it to the development phase. To begin addressing the needs of the world's workforce, this can be seen as a unacceptable systems failure.

When the COSHH Essentials, the first online available toolkit, began being used in countries throughout the world - in part through the excellent efforts of the WHO Collaborating Centre for Occupational Health (WHO CCs) – at some level it was felt that it would become the qualitative risk assessment of choice. To the surprise of many, although often the first toolkit to be used within countries, it was rarely put into practice 'as is' in other countries. Rather, cultural and regulatory considerations prevailed and called for the development of a unique toolkit to fit a given national ORM approach. The driver for this ingenuity and pooling of resources is most often changes in national regulatory requirements that would leave small- and medium-sized enterprises (SMEs), typically 80 – 90% of their working population, without ability to achieve compliance. This could best be seen in Europe, with REACH as an example, and can be contrasted by the US where regulations remain painfully static and the national development of toolkits non-existent.

It is within this environment that the WHO CCs have played an important role of matching, or twinning, a developed country with developing country entities to share information and assist in toolkit development. The ICBWs, supported throughout by the International Occupational Hygiene Association (IOHA), have also played an important role of establishing needs, sharing of knowledge, and offering a forum for the continued validation and evaluation of toolkits available. Most recently, the 3rd (South Africa), 4th (Korea) and 5th ICBWs have in many ways reversed this twinning role as the developing countries are quite often the ones sharing their lessons learned in a manner that significantly assists the development of toolkits and research paths forward in developed countries.

Today we look at a buffet of CB opportunity that has the broad flavors of international cuisine and now a deep support of the OSHH professionals, the chefs if you will, that are continuing to add to the menu. The development of the CB Nanotool, a toolkit for controlling nanomaterial exposures, has played an important role in this professional acceptance. The CB Nanotool's qualitative risk assessment approach is a risk level matrix that is now considered by many national entities to be a more powerful ORM tool for controlling nanomaterial exposures than by its quantitative counterpart. By having CB grace the pages of prestigious research journals and becoming an integral approach for national exposure reduction programs, it now has an opportunity to become an essential part in the future of OSHH. CB is also surprisingly serving as an invaluable risk communication within and between the OSHH professions, even serving to help Occupational Physicians better understand the role and value of Occupational Hygiene which can serve to grow this valuable profession. Currently in development are safety's Barrier Banding concept and Ergonomics toolkits, both harnessing CB's risk communication potential and opening the door to invaluable future collaborations. Together, this is all leading towards simplified occupational health and safety management systems based on CB, like the Risk Level Based Management System, which may indeed be the missing link to achieve reduction in the global burden of work-related disease, illness and injury. The power of the toolkit should no longer be underestimated.

Guiding principles for a WHO toolkit

This document contains a framework for the development of WHO toolkits and our understanding of a toolbox. We would particularly like you to provide us with good practice examples toolkits, as described in this document. If you have any other comments these would also be appreciated. Please send your comments to ochmail@who.int

A TOOLBOX is a collection of strategies for the management of work-related risks, which may be comprised of multiple Toolkits. The Toolbox is a set of various Toolkits intended to address various workplace hazards associated with a specific type of work task and/or sector, and/or job profile. As such, the Toolbox provides a mechanism for managing occupational risk.

A TOOLKIT is a solutions-oriented strategy applying practical tools for the control of a specific hazard or a specific risk¹. Its content and format are based on the best available evidence, supplemented as necessary by the practical experience and technical knowledge of experts in the field.

PURPOSE OF TOOLKITS

The Toolkit is a set of practical risk assessment procedures and related management guidance documents, including advice on simple risk control options. It is designed for use by employers, workers and their representatives, government representatives, and/or health care workers in reducing exposures to workplaces hazards.

Toolkits offer a framework for identifying, assessing, controlling, managing and evaluating workplace hazards. A toolkit should be designed to assist people to work through the following risk management steps.

A. Identify potential workplace hazards and/or high exposure work tasks or jobs and assess the extent of risk stemming from identified hazards, taking account of the severity of the hazard(s), and the duration of exposures to hazards and potential interactions between hazards.

B. For each significant hazard or combination of hazards:

1. identify possible means of eliminating the hazard(s)
2. where elimination is not possible, identify possible means of reducing the risk, often referred to as control options.
3. devise an action plan to reduce risks as much as possible, taking account of the following factors:
 - a. for each particular hazard or group of interacting hazards, the level of risk presented (assessed at step 1 above)
 - b. for each possible means of risk control (identified at step 2 above):
 - its probable effectiveness in eliminating or reducing risk
 - the practicability of implementing it
 - possible effects of its implementation on other hazards that lead to the same or different health outcomes
4. the perceptions and priorities of those who are at risk, concerning both the hazards that are most important to control and preferred means of managing them.
5. determine how it can best be evaluated.

C. Implement the action plan.

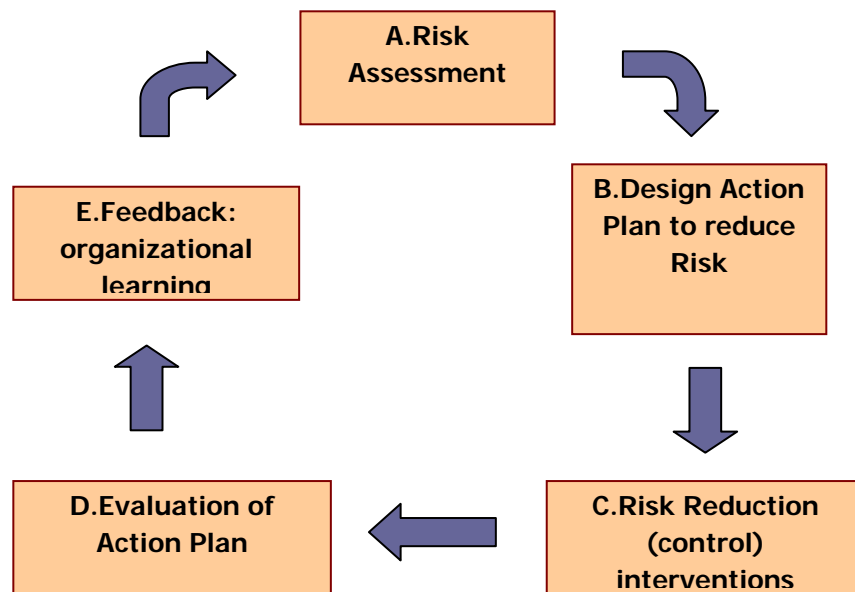
D. Evaluate its impact.

¹ **hazards versus risks** Whereas a hazardous situation has the inherent capacity and potential to cause harm, risks encompass the factor of exposure to a hazard, and are therefore characterized as the probability of a harmful outcome. Psychosocial hazards, for example, may lead, depending on the exposure of individuals to them, to various types of health outcomes such as psychological illness, musculoskeletal disorders, cardiovascular disease, etc.

E. Discuss the result of the evaluation and determine what can be learned from the successes and failures of the action plan. Revise and improve the action plan to target previously unaccounted risks and repeat the cycle.

The above steps are represented in a diagram:

Risk Management approach



The toolkit is intended to provide concise hazard guidance information that is easily understood and used by its main target group (see below for examples of possible users). Means of risk management ranging from simple control through to more complex approaches; for example, controls considered for use in reducing risk from chemical exposures might range from simple hand-washing to more stringent exhaust ventilation, process containment, or ideally – replacement (substitution) of the chemical in question by a non-hazardous alternative.

POSSIBLE USERS OF TOOLKITS

Because of the intended broad applicability and generic nature of the guidance provided by toolkits, they are intended for use by the following audiences:

- members of a health and safety committee;
- health and safety representatives;
- line supervisors;
- foremen;
- workers;
- government representatives;
- health workers implementing basic occupational health services;
- occupational health and safety specialists.
-

ADVANTAGES OF THE TOOLBOX

Considerations which helped to shape the development and evolution of control-focused risk management strategies of the toolbox approach have resulted in the following advantages:

- complementary to traditional hazard control systems (based on the hierarchy of controls)
- addresses traditional and emerging hazards
- practicable and easy to use through clear guidance
- cost-effective
- beneficial for small and medium sized enterprises (SMEs)

- beneficial for emerging economies and developing nations
- applicable in most settings
- a tool which may free-up professionals/experts for more complicated work
- a tool that can be implemented by the employer, workers, or their representatives

LIMITATIONS

Although there are many advantages, the toolkit has some limitations:

- Accuracy of the qualitative assessment
- Accuracy of the records and resource materials (such as material safety data sheet information from the chemical manufacturer)
- Self-assessment tool need to be applied conscientiously (effective use of a safety committee; comprehensiveness of a checklist)

TOOLKIT PRACTICAL FRAMEWORK : 3 MAIN COMPONENTS

The following framework has one introductory or orientation section and ten common possible elements (1-10) which should be considered for inclusion in toolkits. Each element has component parts to be addressed in the development of the toolkit.

All toolkits shall include an introductory; **planning and implementation; training; and evaluation component**. These components will include:

I . PLANNING AND IMPLEMENTATION COMPONENT:

1. Purpose of the toolkit
2. Defined target audience
3. Description of the working context (SME, industrial sector, occupation, etc.) and content of the toolkit as outlined by the risk management cycle. For example, a toolkit that specifically addresses machine guarding as a work-related hazard with a clear risk exposure to accidents would put machine guarding into its working context and content in terms of hazard assessment, management, prevention, training, recordkeeping and evaluation.
4. How to get started:
 - a) How to ensure management commitment; provide the rationale/business case
 - b) Reinvigorating or setting up Labor/Management Committees and defining the role of safety committees in quick identification, communication and intervention. (CA, Australia, Health Care Workers Toolkit) in terms of structure and distribution of responsibilities

II. TRAINING COMPONENT:

- 1) Models for training to cover requirements, recognition and continued good work practices.
- 2) Training modules on assessment, planning, implementation, evaluation and maintenance of prevention and control strategies.
- 3) Description of measures/indicators of success in implementing training.
- 4) Training recordkeeping, such as attendance records, course participation records, evaluation summaries

III. EVALUATION COMPONENTS

- 1) Programme for regular site evaluations to identify new or unresolved hazards and failures in hazard controls including recommendations for improvement of training and implementation.
 - 1) Monitoring system for indicators of success.
 - 2) Lessons learnt.

ELEMENTS WHICH MAY BE CONTAINED WITHIN THE THREE COMPONENTS

Elements (1-10) should be considered for inclusion in toolkits within the possibility of the nature of the toolkit. While each component has specific element which should be addressed in the development of the toolkit these may be addressed in the introduction and not with a specific set of tools.

1) Qualitative Assessment

- a) Site-specific Hazard Analysis:
 - i) Checklist for comprehensive survey and analysis of job hazards and changes in conditions.
 - ii) Are there regulations/legislation?
 - iii) Community exposure (children/families)
 - iv) Records and experiences (examples for recordkeeping tools with annotations on how and why to keep these)
- b) Qualitative Hazard Assessment: Charts and other tools to analyze records for sources, locations and jobs that result in injuries and illnesses. Stratify by workers at risk and level of risk to prioritize interventions.
- c) Qualitative worker health assessment (checklists, routine questions, personal experience/perceptions, risk factors)

2) Design Action Plan to address Hazard Prevention, Control and Maintenance

- a) Task specific guidance documents and available expertise and resources for controlling exposure using practical, effective and fit-for-purpose solutions
- b) Process and recommendations for elimination and substitution
- c) Design of engineering controls wherever feasible and appropriate,
- d) Recommended work practices and administrative controls, and
- e) Specific personal protective equipment.

3) Other considerations for implementation may include

- a) Availability of necessary resources and how to cost out the control measures, assigned responsibility, adequate expertise and authority and accountability.
- b) Document hazards if they haven't been documented before.
- c) Counting the benefits; if available economic analysis.
- d) Best practice/case examples
- e) Collect/develop indicators of success

4) Quantitative assessment (when more information is needed to determine a baseline or routine exposure)

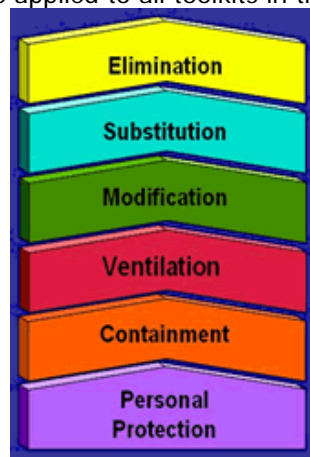
- a) Provide guidance and tools for assessing compliance with existing regulations; or for diagnostic purposes
- b) Provide guidelines for defining the monitoring objectives and outlining an exposure assessment strategy.
- c) Process for defining type and nature of exposure (chemical, physical, traumatic biological) and routes of exposure (inhalation, ingestion, dermal absorption)
- d) Purpose of measurement
- e) Define specialized equipment and operator skills
- f) Describe health assessment strategies:
 - i) A survey of workers (e.g., questionnaire, interviews) regarding exposure and health
 - ii) Physical and laboratory examination of workers
 - iii) Research on a cohort of workers to evaluate the relationship of an agent and consequent disease

5) Incident Investigation (incidents and near misses are investigated to identify causes and means of prevention).

- a) Provide guidelines for using sentinel health events as a focal point for intervention in a workplace.
- b) Define how investigation can be used to design preventive interventions in the workplace.
- c) Recommendations and guidance on sharing results with managers and workers and their representatives.
- d) Include components of an incident investigation including interviews, inspection, and communication.
- e) Utilize this information to target preventive activities

- f) Components for a written incident report and communication of findings and recommendations.
- 6) **Policy** (In addition to the work place based interventions there can be political and legal interventions).
- Using information gained through surveillance, qualitative and quantitative risk assessment, and worksite interventions to communicate with policy makers about findings.
 - How to use or gather supportive information and data
 - Policy models in safety and health
 - How to influence policy that can help reduce workplace hazards
 - Monitoring policy.
- 7) **Recordkeeping and Surveillance:** All work related incidents/illnesses should be reported as soon as possible after the incident/illness has occurred. A recordkeeping toolkit should include:
- Purpose of recordkeeping
 - Components of a recordkeeping program
 - How to use the data to detect health problems and relate exposure information to health outcomes.
 - Using a recordkeeping program as an evaluation tool for health risks
- 8) **Medical program**
- Describe key elements of a medical program including surveillance, vaccinations, and post exposure intervention.
 - Medical programs for evaluating the effectiveness of control strategies and for post exposure diagnosis and treatment.
 - Practitioner skills and experience in recognizing potential injuries and illnesses due to work
 - Expertise in occupational and training in the area of work-related injuries and illnesses.
 - Medical program relationship with employers and employees.

The risk management pyramid can be applied to all toolkits in the wider sense in stages 2 and 3.



Toolkits for some kinds of hazard or risk are best when they are interactive or adaptable, allowing the user to enter specific worksite information to obtain exposure control guidance for the specific workplace scenario. For example, when using the Chemical Toolkit, the user finds the correct chemical hazard group by looking at the label or the Safety Data Sheet from the chemical supplier. The user then determines how the chemical will be used and in what quantity. This information will lead the user to the appropriate hazard or exposure control recommendations. Toolkits for other kinds of risk will be most effective when 'the user' is a heterogeneous group of workers familiar with the work task(s), job(s) and overall work environment, who collaboratively participate throughout the risk

management steps outlined above. Examples of such toolkits are those intended to manage risk for musculoskeletal disorders or for mental illness.

The WHO protecting health workers -- preventing needlestick injuries tool kit was developed and piloted in 2003-2005, adapted and translated into Spanish in 2006 and now has been utilized by over 25 countries in Africa, Latin America, Southeast Asia, Europe and the Arabian gulf regions. The tool kit includes background information on the epidemiology of health worker exposure to biological hazards, resources for prevention and control of exposure and training tools. A Core curriculum of 5 presentations and practice "minipresentations" for a training of trainers workshop is included in the kit. It is currently under revision and will be finalized for the special issue of GOHNET on health worker occupational health at the end of 2009. The English version is available at http://www.who.int/occupational_health/activities/pnitoolkit/en/index.html and Spanish version, Prevención de lesiones por pinchazo de aguja, at http://www.who.int/occupational_health/activities/pnitoolkit/es/index.html. Please send any comments, suggestions and web links to resources that you think should be included in the revised tool kit to Susan Wilburn (wilburns@who.int).

What criteria do you use to select or recommend a product or practice to manage safety risks in the workplace?

Anita Dubey, Institute for Work & Health (IWH)
Canada



Cost and ease of use are factors you'd probably consider. You'd also want to know that the product actually works to control the targeted risks. Often, this final criterion - knowing whether a particular intervention is effective or not - is surprisingly difficult to establish. Quality research can help to answer this type of question, but is not easily accessible for workplaces. Regardless of how inexpensive or easily an intervention can be put into practice, the risks will not be adequately addressed if it doesn't work.

The Institute for Work & Health (IWH) is a Canadian not-for-profit research organization that aims to produce high quality, independent research to promote and protect the health of working people. IWH also aims to produce research that is relevant, accessible and useful. For this reason, we have also developed tools or guides for non-researchers based on scientific evidence. Our research addresses two broad goals: to help prevent workplace injury, and improving outcomes for injured workers in recovery and return to work. Accordingly, our guides fall into one of these two categories.

Our latest three guides for workplaces are a software tool to calculate the costs and benefits of an occupational health and safety (OHS) initiative; an aid to implement participatory ergonomics to prevent hazards; and a guide to help injured workers' recovery and return to work in challenging cases.

These and other evidence-based guides are available for free, in electronic form, from IWH's website at www.iwh.on.ca. (Some may have a minimal cost for a print version, if it is available). IWH receives core funding from the Workplace Safety and Insurance Board, which is the workers' compensation board in the province of Ontario, Canada. IWH scientists are also regularly awarded competitive

grants from agencies such as the Canadian Institutes for Health Research or the U.S. National Institute for Occupational Health and Safety. These types of funds support the development of our guides and tools.

Why is research so important?

Consider the case of back belts to prevent or manage back pain. It would seem that they would help stabilize a worker's back while lifting heavy objects and prevent back injuries. But they don't, as many readers may know. An IWH review of studies on back belts concluded that they are not only ineffective; they may actually *increase* the risk of injury.

On the other hand, another IWH review showed that arm supports may help prevent soft-tissue injuries to the arm, wrists, hands, shoulder or neck. This 2008 study – called a systematic review - looked at 19 different types of health and safety interventions for upper extremity musculoskeletal disorders.

Translating these types of research findings into practical formats is what IWH considers to be an evidence-based guide or tool. Such guides provide a way for workplaces to benefit from and apply research evidence to manage risks and prevent injury. Such guides are an important aspect of IWH's work in promoting an evidence-based approach to decision-making in the work-health field. This approach is already well-established in the health-care field, where evidence-based practice guidelines and tools have helped ensure clinicians use effective treatments.

At IWH, another important aspect of tool or guide development is involving our stakeholders in the process. IWH has both formal and informal networks with clinicians, health and safety professionals and others. During the development phase, we invite members of relevant networks to provide feedback – a “reality check,” essentially – on its relevance, ease of use and other factors.

This approach has helped us successfully produce guides for different audiences, including OHS professionals, clinicians and return-to-work (RTW) experts.

Three new IWH guides for workplaces

IWH has released two new guides in 2009 and one more will be available this fall. Below we offer an overview of the latest guides, as well as a brief description of a few more popular guides from recent years. These items can be found at www.iwh.on.ca/products.

Health & Safety Smart Planner [working title]. What are the costs and benefits of a workplace OHS initiative? This software tool provides a step-by-step approach, in a workbook format, to help calculate the financial returns from an OHS initiative. It has several features. An “incident cost calculator” enables a workplace to record its ongoing OHS incidents in a database. Using information from this database, workplaces can analyze the costs and benefits of an OHS initiative they want to evaluate. In scientific terms, the latter analysis is known as an “economic evaluation.”

Dr. Emile Tompa, a scientist and economist at IWH, is leading the development of this tool. It draws from a systematic review of studies that included economic evaluations of OHS interventions. Tompa also edited a methods text designed for researchers to advance the use of economic evaluation methods in the OHS field².

Red Flags/Green Lights: A Guide to Identifying and Solving Return-to-Work Problems.

Following an injury, most workers resume their jobs and recover in a predictable way. For a few,

² The IWH team working on this tool has translated these sound economic principles into an easy-to-use interface. The Smart Planner is being field-tested in workplaces over the summer of 2009. It is expected to be available late in 2009 as a downloadable software file from IWH's website.

however, problems may arise that complicate their recovery and return to work (RTW). This guide provides advice to help identify and solve these problems. It presents warning signs (or “red lights”) and helpful practices (or “green lights”) in four areas: return to work, health-care, vocational rehabilitation or compensation claims process. By looking at the barriers in the overall RTW system, the guide also shows the full picture of what an injured worker is experiencing, which individual decision-makers may not easily see.

The guide evolved out of a study on complex workers’ compensation claims, led by scientist and sociologist Dr. Ellen MacEachen. In interviews with injured workers and service providers, her research team began to see consistent, often seemingly bureaucratic or mundane issues, which appeared to complicate return to work. During several workshops with experts they also determined helpful approaches for managing these return to work problems. The RTW Guide is available at www.iwh.on.ca/rtw-problems-guide.

Reducing MSD hazards in the workplace

Participatory ergonomics (PE) is one approach to preventing work-related musculoskeletal disorders (MSDs). PE involves including workers, supervisors and others in the workplace to identify and come up with solutions to improve their work environments and reduce MSD risks. This concise guide presents the key elements necessary to establish a successful PE program in a workplace. Each element is illustrated by a case study from a real-life situation where a program was either successfully implemented (or not, if an element was missing).

Two past IWH reviews support the development of this guide. In 2005, a systematic review showed that PE was effective in reducing MSD symptoms, workers’ compensation claims and lost days at work. More recently, another review was carried out by associate scientist and ergonomist Dwayne Van Eerd to identify the elements involved in successful PE programs. This review looked at studies on PE process and implementation. These key elements are now in a booklet form, available at www.iwh.on.ca/pe-guide

Other popular IWH evidence guides

Guide to Evaluating the Effectiveness of Strategies for Preventing Work Injuries

This guide shows how to evaluate a program’s effectiveness, presenting real-life examples. It is aimed at safety professionals or others with a mandate to study whether an OHS prevention program is working. The guide provides detailed information on planning an evaluation, and explains different study designs, measuring results, qualitative research, statistical analysis and reporting on the evaluation. The guide was published by the Institute for Work & Health and the U.S. National Institute for Occupational Safety and Health (NIOSH).

Seven “Principles” for Successful Return to Work

What do employers need to do to enhance a worker’s return to work after an injury or illness? These evidence-based principles provide some answers. Each of the seven key principles is followed by a description of the research findings supporting it. The Seven Principles are based on an IWH systematic review from 2004, which examined which elements were effective in return to work. This guide is one of the most popular items on the IWH website.

Sharing Best Evidence

How can you improve health and safety in small businesses? Which prevention programs are most effective for health-care workers? What are the risk factors for injury among young workers? While results from individual studies on these topics may be helpful, collective findings from a number of higher quality studies provide more solid evidence. IWH has produced summaries, called *Sharing Best Evidence*, of the evidence on these and other topics. Each summary is based on a systematic review conducted by IWH. In these rigorous reviews, a research team identifies a topic based on stakeholder input, finds relevant studies, assesses their quality and draws conclusions based on higher quality

studies. Summaries are available for each IWH systematic prevention review at: www.iwh.on.ca/sharing-best-evidence.

Future directions

As IWH is an applied research centre, our scientists are accustomed to working with stakeholders and making their research relevant. Many are now thinking of how their research studies translate into practical guides and tools for our audiences, so IWH will likely continue to produce guides where a need has been identified.

This work is supported by a well-developed Knowledge Transfer and Exchange (KTE) Department at IWH. KTE staff engages external audiences through our networks and for individual projects, to both share our research findings and learn from their practical experiences, which makes our work more relevant. IWH's mandate also calls for research on the impact of our guides, so further projects are planned to examine how our latest guides are being used and the effect they have had.

OTHER TOPICS

Physician health and patient care: A Canadian perspective

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The emotional, mental, and physical wellbeing of health care professionals is receiving increased attention from policy makers and researchers in a number of countries. As the point of first contact between patients and the health care system, the wellbeing of physicians impacts not only the efficacy of their clinical practice, but more importantly, patient health outcomes. In our recent mixed method study of 278 physicians from a province of Canada, we addressed two broad questions that relate to their health and wellbeing.

- 1) What were the distinct challenges encountered in their practice?
- 2) How can practice management and physician wellbeing be improved?



To address question 1, our qualitative study utilized the socio-ecological model to frame the written personal and professional experiences reported by the physicians.[1] Some of these stressors included interpersonal and organizational conflicts, work-life imbalance, and deficiencies in human and material resources to support their practices.

Our quantitative study provided insight into some of the predictors that led to stress and burnout in physicians, primarily with the addition of communications, which has not been examined extensively in

the health care context.[2] Specifically, we found that engaging in emotional communications with patients, work-life conflict, lack of autonomy, and excessive workload, all contributed to physical symptoms of stress and burnout. Female physicians engaged in more emotional communication with patients, and reported greater physical symptoms of stress than the male physicians. They also used a greater range of stress coping strategies, in particular social support, more than the male physicians.[3]

To address question 2, our participants provided a number of ideas to improve medical practice, retention strategies, and their own health and wellbeing.[1] Some indicated that workshops and professional development seminars on lifestyle management, recognizing the signs of burnout, and emotional management would be beneficial. Other ideas included healthy workplace initiatives such as setting limits on work hours, family-friendly human resource policies, and processes to promote accountability and fairness.

Strategies to reform and restructure health systems are ongoing, and innovative ways to educate and develop health care professionals will be especially desirable. The blending of different knowledge bases such as that gained from research and scholarship, professional experience, and personal knowledge gained through life experience, will serve to enhance the delivery of patient-centered care.[4]

Many of our findings are reflected in the positive practice environment initiative which was formulated to improve recruitment, enhance the performance of the existing workforce, and to lessen the attrition of health care workers.[5] To accomplish this initiative, a set of guidelines for healthy workplaces has been developed, which outlines ways that organizations can foster this environment for health care professionals.[5]

Much of the research on physician stress and burnout has come from developed countries. Studies are needed to understand the predictors of stress and burnout in physicians from developing countries to help inform interventions. This could prove to be invaluable information for policy makers in countries where resources are scarce, yet the need for health care professionals is particularly acute.

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ANNOUNCEMENTS

PROTECTING WORKERS HEALTH IN A CLIMATE OF CHANGE – FROM POLICY TO ACTION



The Eighth Meeting of the Global Network of WHO Collaborating Centres for Occupational Health was held in Geneva from 19-23 October 2009. The meeting agreed on a package of priority initiatives, projects and deliverables to advance the implementation of the WHO Global Plan of Action on Workers' Health in the period 2009-2012. As part of the programme, a high-level round table addressed opportunities for protecting and promoting the health of workers arising from the United Nations Joint Crisis Initiatives, such as development of green economy and a basic social protection floor.

http://www.who.int/occupational_health/network/collaborating_centres_meeting/en/index.html

International Course on Biological Monitoring: A Valuable Tool for a Healthier Workplace

The Analytical Services Section of the National Institute for Occupational Health (NIOH), in collaboration with Ampath and Lancet Laboratories, presented a two day International Course on Biological Monitoring: A Valuable Tool for a Healthier Workplace. The course was presented in Johannesburg at the NIOH (20-21 October 2008) and Durban (23-24 October 2008) at the School of Medicine, University of KwaZulu Natal.

This course was presented as part of the Global Network Plan (2006-2010) of the WHO Collaborating Centres (CC) in Occupational Health (OH); the NIOH has been a WHO CC in OH since January 2005. This particular NIOH project in the current Global Network Plan is titled "Developing capacity in biological monitoring in occupational and environmental health" and falls within Global Plan of Action Objective 3 (Strengthening Occupational Health Services), with a focus on capacity building.

The course was presented by international and local experts in the field of biological monitoring. The international experts were Ms Kate Jones - principal scientist from the Health & Safety Laboratory (HSL; a WHO CC in OH), UK and ambassador of the British Occupational Hygiene Society (BOHS) for South Africa for 2008; Dr Henri Heussen - senior occupational hygienist / toxicologist and specialist in the application of biological monitoring in industrial settings, from Arbo Unie, Netherlands; and Mr Ayyappan Ramalingam - senior lecturer and expert in industrial hygiene, risk assessment and environmental chemistry, from the Department of Environmental Health Engineering, Sri Ramachandra University, Chennai, India (a WHO CC in OH). South African experts in the field included Ms Suzette Pelser from WKI, Johannesburg and Ms Sharita Ismail from Metallica Chemicals, Cato Ridge, KwaZulu Natal.

The course content and logistics were developed by Ms Inakshi Naik (Head of Section: NIOH Analytical Services) and Ms Kate Jones from the HSL, UK. The course is designed to cover topics such

as: the role of biomarkers in exposure assessment of chemical exposures; practicalities and ethical issues in the development of a biological monitoring programme; the role of the laboratories in providing biological monitoring capacity; interpretation and communication of results; etc. Based on these topics, participants were given the opportunity to actively engage in practical exercises through structured interactive sessions throughout the course.

This was the first time that a comprehensive course in biological monitoring has been presented in South Africa, and it received excellent reviews from the 140 delegates who attended both sessions. It fostered a spirit of collaborative knowledge transfer, culminating in the decision to establish an electronic biological monitoring forum where professionals, both locally and internationally, could communicate regarding biological monitoring of chemical exposures in the workplace.

For more information regarding biological monitoring in the workplace please contact:
Ms Inakshi Naik; ina.naik@nioh.nhls.ac.za

SOBANE strategy : professional risk management

http://www.sobane.be/langue_eng.html

Sobane is an interesting 'toolbox' consisting of a variety of practical guides to be used for different occupational sectors. Its strategy focuses on the management of occupational risks and its aim is to make risk preventing faster, more cost-effective and more participatory to increase effectiveness.

New NIOSH publication: Qualitative Risk Characterization and Management of Occupational Hazards: Control Banding (CB) <http://www.cdc.gov/niosh/docs/2009-152>

A new Code of Ethics for Occupational Medicine for Germany

[http://www.uke.de/institute/arbeitsmedizin/downloads/universitaetsprofessur-](http://www.uke.de/institute/arbeitsmedizin/downloads/universitaetsprofessur-arbeitsmedizin/Code_of_ethics_of_occupational_medicine.pdf)

[arbeitsmedizin/Code_of_ethics_of_occupational_medicine.pdf](http://www.uke.de/institute/arbeitsmedizin/downloads/universitaetsprofessur-arbeitsmedizin/Code_of_ethics_of_occupational_medicine.pdf)

[http://www.uke.de/zentren/psychosoziale-mezizin/index_ENG.php?id=-1_-1_-](http://www.uke.de/zentren/psychosoziale-mezizin/index_ENG.php?id=-1_-1_-1&as_link=http%3A/www.uke.de/zentren/psychosoziale-mezizin/index_ENG.php)

[1&as_link=http%3A/www.uke.de/zentren/psychosoziale-mezizin/index_ENG.php](http://www.uke.de/zentren/psychosoziale-mezizin/index_ENG.php)

Welcome to "Towards Better Work and Well-being" International Conference on 10-12 February 2010 in Helsinki, Finland!

Deadline for free communication abstracts is 7 September 2009!

The Conference provides an opportunity to discuss strategies and tools for the promotion of health and well-being at the workplace, and to explore their links to productivity. It also provides a forum for presenting findings, and demonstrating methods, tools and approaches to health, and well-being at workplaces.

The main themes are: Evidence, action and implementation, Management and good practices - Better productivity, The Workplace as an arena for health promotion, and Expert services and competencies.

The Conference is organized by the Finnish Institute of Occupational Health with national and international partners. More information on the Conference is available at <http://www.ttl.fi/betterwork>. For late abstract submission, please contact betterwork@ttl.fi

Control Banding - practical tools for the assessment and management of occupational risks - Internet Resources for chemical risks

- COSHH Essentials: Easy steps to control health risks from chemicals. U.K. Health and Safety Executive. <http://www.coshh-essentials.org.uk/>
- Globally Harmonized System of Classification and Labelling of Chemicals (GHS). UNECE (United Nations Economic Commission for Europe). http://www.unece.org/trans/danger/publi/ghs/ghs_welcome_e.html
- SafeWork Chemical Control Banding. In Focus Programme on Safety and Health at Work and the Environment, International Labour Organization. http://www.ilo.org/public/english/protection/safework/ctrl_banding/index.htm
- ILO, International Chemical Safety Cards (ICSCs), updated 4 February 2008. <http://www.ilo.org/public/english/protection/safework/cis/products/icsc/>
- Stoffenmanager: <http://www.Stoffenmanager.nl>
- CPWR — The Center for Construction Research and Training. <http://www.cpwr.com/rp-constructionsolutions.html>
- Fourth International Control Banding Workshop (4ICBW) http://tech.groups.yahoo.com/group/control_banding_strategies

Contributors' info:

http://www.who.int/occupational_health/publications/newsletter/en/oecontribinfoe.pdf

WHO contact: http://www.who.int/occupational_health/contact/en/index.html

Joining GOHNET: http://www.who.int/occupational_health/contact/en/index.html

Username: guest

Password: guest

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