

# The Global Occupational Health Network

SPECIAL ISSUE 2004 (English only)



## Contributions of the Global Network of Collaborating Centers in Occupational Health to the Global Work of WHO

Marilyn Fingerhut ([maf2@cdc.gov](mailto:maf2@cdc.gov))

Coordinator of the Global Network of Collaborating Centers

This issue of GOHNET addresses the question of the value of the Global Network of Collaborating Centers in Occupational Health. Some examples are described of critically important contributions of the work of WHO collaborating centers toward WHO's effort to provide "Occupational Health for All". *None of these activities would have occurred without the Global Network of CCs.*



### Secondments and Sabbaticals

WHO greatly appreciates the work of the CCs and invites even greater contributions. NIOSH, USA funded the seconding of Dr. Marilyn Fingerhut to Geneva for two years recently, and currently NIOSH provides a "virtual" secondment of one-third of her time in the U.S. to coordinate the Global Network for WHO. WHO invites other National Institutes to consider secondments of personnel to WHO headquarters or regional offices, for a year or for shorter periods. The synergism and sharing already occurring due to the personal and professional interactions of the Network will be greatly enhanced by exchanges of personnel.

It is also possible that scientists or practitioners might spend academic sabbatical periods working on occupational health at WHO headquarter or regional offices, or periods of time at collaborating centers in transitional and developing countries. Interested persons are invited to contact Dr. Gerry Eijkemans at [eijkemansg@who.int](mailto:eijkemansg@who.int).

## History of WHO Collaborating Centers in Occupational Health

The system of WHO collaborating centers represents one of the earliest mechanisms for carrying out technical cooperation between WHO and Member States. As early as 1949, the Second World Health Assembly laid down the policy, which has been followed consistently since then, that the WHO should not "establish under its own auspices, international research institutions" and that "research in the field of health is best advanced by assisting, coordinating and making use of the activities of existing institutions". (Resolutions WHA2.19 and WHA2.32, 1949)

A WHO collaborating center (CC) is a national institution designated by the Director-General of the World Health Organisation to form part of an international collaborative network carrying out activities in support of WHO's mandate for international health work and its programme priorities. An entire institution with recognized scientific standing, or a department or laboratory within an institution may become a collaborating center. Becoming a CC involves a formal application process, following a two-year period of joint activities, in which the institution commits to certain activities, formal acceptance by WHO, and review and redesignation every four years. The CC participates in activities based on a plan of work agreed upon by the center and agreed to by WHO. Exchange of experience and collaboration among centers is facilitated by meetings of CCs. The CC may use the title, logo and official letterhead of "WHO collaborating center" in matters related to its work on behalf of WHO.

WHO collaborating centers play a strategic role in helping WHO meet two major needs:

- They contribute to implementing WHO's programme priorities in close coordination with the WHO unit at

## IN THIS ISSUE:

|   |    |
|---|----|
| Contributions of the Global Network of Collaborating Centers in Occupational Health to the Global Work of WHO | 1  |
| The Diploma and Masters in Public Health: Occupational Hygiene, University of the Witwatersand, South Africa  | 3  |
| Positive Developments following Airborne Dust Workshops in South Africa                                       | 4  |
| Raising Awareness of Psychological Harassment at Work   | 6  |
| WHO Training and Educational Activities via the Network of Collaborating Centres in Occupational Health       | 6  |
| Economic Evaluation of Interventions to Reduce Levels of Exposure to Occupational Risk Factors                | 8  |
| Contribution of Occupational Risk Factors to the Global Burden of Disease                                     | 9  |
| Thirteenth Session of the Joint ILO/WHO Committee on Occupational Health                                      | 10 |
| Training Tool for Dust Control  | 10 |

headquarters and in the six Regional offices.

- They strengthen institutional capacity in countries and regions. Key functions of WHO collaborating centers include
- Collection and dissemination of information
- Participation in collaborative research and technical assistance
- Education and training, including research training
- Provision of information and advice on scientific, technical and policy issues

### The Global Network of WHO CCs in Occupational Health

Collaborating Centers in Occupational Health have existed since the 1970's. However, it was not until June, 1990 that the Global Network of WHO Collaborating Centres in Occupational Health (Network) was formed at a meeting of CCs in Helsinki at the Finnish Institute of Occupational Health, with the intent to strengthen coordination of the centers. The first meeting of the Network was held in Moscow in September 1992, with meetings held approximately every two years thereafter: in Beijing in 1994, in Bogota in 1997, Helsinki in 1999, Chiangmai, Thailand in 2001, and Iguassu Falls, Brazil in February 2003 (see pictures). The next Network meeting will be in Milan in June, 2006.

The Global Network of CCs in Occupational Health now consists of seventy Institutes and organizations spread across the five continents. These centers represent a substantial component of the world's ministerial, academic and professional communities in occupational health (See Figure 1, Map of CCs). A Network of substantial size is needed due to the wide range and complexity of workplace risks and settings throughout the global community.

WHO staff in Geneva and the Coordinator of the Network work with the Regional Advisors and the CC Directors to facilitate the work of the Collaborating Centers. This is done by nurturing the efforts, engaging in the science of efforts involving several CCs, reviewing accomplishments, and assisting the creation of partnerships to conduct the work.

### Occupational health and safety at country level involves both Ministries of Labor and Ministries of Health.

The Global Network of CCs in Occupational Health includes the active participation of ILO and of the three NGOs in formal relation to the occupational program: the International Commission on Occupational Health (ICOH), the International Occupational Hygiene Association (IOHA), and the International Ergonomics Association (IEA). Direct interactions of WHO and ILO and active collaboration within the Global Network expand greatly the global occupational health programme at WHO headquarters, which has always been small in size, and the programmes of the WHO Regional offices. The importance of occupational health nationally to both Ministers of Health and Ministers of Labour is illustrated by the long tradition of collaboration between the International Labour Organisation and the World Health Organisation. In fact, the Joint ILO/WHO Committee on Occupational Health was formed shortly after the founding of WHO, and the first meeting occurred in 1950. The results of the December, 2003 meeting are described elsewhere in this issue.

### What has been the value of the Network of CCs in Occupational Health?

The formation of the Network in 1990 immediately led to the development by the CCs of key policy recommendations ultimately brought to the WHO's World Health Assembly for approval, thus setting the direction of the WHO Global Strategy on Occupational Health. With support of the CCs, WHO created the *WHO Global Strategy on Occupational Health for All*, which was accepted by the Network at its Meeting in Beijing in 1994 and approved by the

WHO World Health Assembly in 1996 (WHA49.12, Agenda item 17, Annex 1). It is this strategy that continues to fuel and motivate the activities within the WHO Global Programme in Occupational Health.

At the 5<sup>th</sup> Network Meeting in Chiangmai, Thailand in 2001, in line with the Global Strategy, the Network created a global agenda of fifteen occupational health priority areas and committed to working in these areas. A common work plan was developed, and a Task Force of CCs was created to work in each priority area.

\* **The 2001-2005 WHO Global Collaborating Center Work Plan can be found at** [www.who.int/occupational\\_health](http://www.who.int/occupational_health). The priority areas and Task Forces are:

1. Occupational health technical guidance
2. Intensive partnership in Africa
3. Child labor and adolescent workers
4. Elimination of silicosis
5. Health care workers
6. Health promotion activity
7. Mental health and stress at work
8. Promotion of OS&H in small enterprises and in the informal sector
9. Prevention of musculoskeletal disorders
10. Preventive technology
11. Training of occupational health and safety personnel
12. Internet resources and networks
13. National and local profiles and indicators
14. Economic evaluation
15. Global burden of disease

This Global CC Network 2001-2005 Work Plan contains more than 300 projects and is periodically updated. The Work Plan contains an impressive range of project commitments that are generating useful products. The projects range from documents and brochures to training courses for occupational health personnel and/or students, from translation of occupational health materials to the establishment of questionnaires, guidelines and increased international collaboration.

Described in this issue of GOHNET is a small selection of products of the CC Global Work Plan:

- Mentors arranged by IOHA for students in the diploma and masters programme in occupational hygiene established by a CC in South Africa (Task Force 2)
- Training materials and courses prepared by CCs in the United States, Sweden, Finland and South Africa (Task Force 11)
- Dust control training workshops organized by CCs in South Africa (Task Force 4)
- A "Mobbing" document developed by CCs in Italy and Switzerland, reviewed by CCs in developing nations, and translated by CCs in Latin America, Japan and Bulgaria
- The WHO Global Burden of Disease effort accomplished by WHO researchers and colleagues from CCs in Chile, the United States and Australia (Task Force 15)
- The WHO cost-benefit analysis and net-costs efforts carried out by WHO staff and colleagues in CCs in the United States and India (Task Force 14).

## The Diploma and Masters in Public Health: Occupational Hygiene, University of the Witwatersand, South Africa

David Rees (*david.rees@nhls.ac.za*)

*National Centre for Occupational Health, Johannesburg*

Over the past three decades, various South African commissions and committees of enquiry have found that South Africa has serious deficits in occupational health and safety performance. These are partly due to shortages of trained practitioners, particularly occupational hygienists, the most important preventive practitioner. Compounding the problem is the lack of infrastructure to train occupational hygienists.

To assist in remedying this deficit a meeting of national and provincial Department of Health officials, held in Durban during June 1999, agreed that the South Africa's National Institute for Occupational Health (NIOH, previously the NCOH) and the University of the Witwatersrand would establish a diploma and masters programme in occupational hygiene.

This intention was not only to produce competent professionals, but also in the longer term to establish a self-sustaining faculty of occupational hygiene to support continuing education programmes, train occupational hygiene practitioners at all levels, conduct research and to develop specialised capacity for appropriate problem solving. Since occupational health in the South African context is primarily a public health matter, the programme was established in the School of Public Health. The programme has now been established as a three-year part-time qualification. Fifteen students have finished the two-year course work and are completing their research projects; 17 students have finished the course work and are starting their research and 20 have just started. The class of 2004 includes seven students from countries neighbouring South Africa.

The occupational hygiene programme was started without any hygienists on the University staff and so had to rely heavily on international and local support. Fortunately, many agencies, including the WHO Collaborating Centres, provided it:

- the University of Michigan/Fogarty International Center Programme for Research and Training in Environmental and Occupational Health in the SADC Region;
- Sweden's National Institute for Working Life (NIWL);
- the Institute of Occupational Health, Birmingham University (through a British Council Higher Education Link);
- the American Industrial Hygiene Association;
- the International Occupational Hygiene Association;

- the USA National Institute for Occupational Safety and Health (NIOSH);
- the South Africa/World Health Organisation Technical Cooperation Programme;
- the Anglo American Chairman's Fund;
- the Department of Health, South Africa;
- WHO

Much of the support to develop the programme was promoted through contacts made at meetings of the WHO Network Collaborating Centres, and in particular the Network Task Forces on the Intensive Partnership in Africa, and on training. The personal contact provided opportunities to persuade very busy professionals to give time and skill to developing occupational hygiene in a country far from their own.

A particular difficulty faced by the programme was the requirement that students complete a research project in Year 3, as these projects require high-level technical supervision, unavailable in the region. The American Industrial Hygiene Association contributed substantially to overcoming this problem. Its President, David Zalk, linked each student to a partner in the USA who provided technical comment and support in protocol development and Research Report writing. In the longer-term, the graduated students will be able to fulfill the role of the USA partners.

The South African programme would not have been possible without international partnerships and the determination of occupational hygienists and their organisations to make it work; these practitioners demonstrating why occupational hygiene is called a noble profession.

### Overview of the course

The DPH and MPH: Occupational Hygiene is offered by the Faculty of Health Sciences, University of the Witwatersrand and the National Institute for Occupational Health (NIOH). It is a part time course leading to the Diploma of Public Health: Occupational Hygiene or the Masters of Public Health: Occupational Hygiene. The Diploma requires a minimum of two years' study while the Masters requires three years. Over the first two years students are required to pass the 12 courses or modules shown in Table 1. A few of the modules are distance-based but most require attendance at lectures and practicals for one week each at the Medical School of the University of the Witwatersrand.

The modules also require the completion of home assignments. The students are evaluated assignments as well as on course examinations.

Successful completion of the modules qualifies the student for the Diploma. Those students wishing to obtain the Masters degree are also required to carry out a research project during the third year and to submit a suitable research report for evaluation.

**Table 1: Courses of the Diploma and Masters in Occupational Hygiene**

#### Part 1:

Management in health and health services  
Introduction to health measurement  
Primary health law and health systems.  
Introduction to environmental and occupational health  
Fundamentals of occupational hygiene and hazardous substances

#### Part 2

Risk assessment and management  
Measurement of hazardous substances  
Ergonomics, manual work and physical agents  
Controlling occupational environments  
Occupational safety, physical hazards and biohazards  
Occupational hygiene fieldwork and occupational health legislation

## Positive Developments following airborne Dust Workshops in South Africa

([www.sheafrika.info/Publications/SummaryDustCourses.pdf](http://www.sheafrika.info/Publications/SummaryDustCourses.pdf))

*Sophia Kisting (skisting@cormack.uct.ac.za)  
Occupational and environmental Health Research Unit  
School of Public Health and Family Medicine  
University of Cape Town*

### Background

Under the umbrella of the WHO/ILO Joint Effort for OHS in Africa, pilot airborne dust control courses were held in Cape Town and Johannesburg, South Africa from 10-28 March 2003. We were fortunate to have visiting facilitators from the National Institute for Working Life (NIWL), Sweden and the Finnish Institute for Occupational Health (FIOH) to contribute to local efforts for greater control of airborne dust. They prepared the course material as part of their work as WHO Occupational Health Collaborating Centres. The workshops were facilitated by Ing-Marie Andersson, Gunnar Rosén and Lars-Erik Byström of the NIWL, Sweden and Hannu Riiipinen from the FIOH, Finland. In Cape Town the course was jointly hosted by the Occupational and Environmental Health Research Unit (OEHRU) and the Peninsula Technikon. In Johannesburg the course was hosted by the National Centre for Occupational Health (NCOH). Both the OEHRU and the NCOH are in the process of becoming WHO Occupational Health Collaborating Centres.

Many countries in the Southern African region have a high prevalence of preventable airborne dust diseases especially silicosis with related Tuberculosis. Historic and economic factors, as well as differential control standards globally, play an important role in the continued exposure of workers and communities to airborne dust. These factors were taken into consideration in the planning and coordination of the courses.

### Addition of local material to course content

The first week was spent visiting different industries in and around Cape Town. The facilitators incorporated the information gathered locally into the course material. Workplaces visited included a quarry, a bakery and a chip board production factory. Visits to the workplaces were arranged beforehand and we had the kind cooperation of both management and workers to use video cameras and to make use of the information gathered for teaching purposes in South Africa as well as in other countries. Members from these workplaces were invited to participate in the workshops. Their participation in the discussions made an important contribution to the practical orientation of the workshops.

### Participants

There were a total of 58 participants in the 2 workshops including 8 colleagues from Southern Africa Development Community (SADC) member states (other than South Africa). These countries were Botswana, Lesotho, Malawi, Namibia, Swaziland and Zambia. Their participation enriched the discussions and it was surprising how similar the airborne dust problems were in the different countries. Amongst the participants were industrial hygienists, trade unionists, senior university/technikon lecturers and researchers, labour inspectors, private occupational health consultants, occupational health doctors and nurses and a few occupational and environmental health students.

### The course

The first two days of the courses were based on the WHO Prevention

and Control Exchange Programme (PACE) document on airborne dust and the third day covered the PIMEX Method. The facilitators are from countries where they have managed to have good control of airborne dust and where the incidence of diseases such as silicosis have been reduced to less than 5 per year. What the facilitators stressed repeatedly was the central role played by workers engaged in dusty industries in achieving these remarkable results in their countries. The important principle they wanted to impart was that, to prevent disease from airborne dust, the central focus should be on the informed participation of workers in dust control programmes of which technical measures are but one aspect.

There was active participation in the small group discussions as well as in the report back sessions. The teaching material included printouts of the power-point slides used by the facilitators and video clips from different workplaces. This worked well and encouraged participation. There was a concern that language differences may be a problem but it turned out not to be. During these courses it was not necessary to provide translation services. All participants received a certificate of attendance jointly issued by the NIWL in Sweden and the FIOH in Finland.

### Sponsorship for the workshop

In an important gesture of national and international collaboration, different institutions involved in occupational and environmental health have contributed in different and important ways to make possible the running of this timely pilot course on airborne dust control for the Southern African region. The NIWL and the FIOH sponsored the facilitators to run the course in South Africa and also the development and preparation of the course materials.

The University of Michigan, Fogarty International Center, Southern African Programme in Environmental and Occupational Health covered the cost of eight participants from SADC member states and two from Kwazulu-Natal province in South Africa.

The WHO, under the umbrella of the WHO/ILO Joint Effort for Occupational Health in Africa as well as the Occupational and Environmental Health Research Unit (UCT) supported the organisation and coordination of the courses.

### Important observations and reflections on the course

The airborne dust courses provide a beautiful example of international collaboration, both North-South and South-South and goodwill among people from different and diverse institutions and backgrounds.

Dust control is not a problem for the mining sector only but involves several other industrial sectors.

There is a lack of infrastructure in some countries and unequal access to information within countries themselves. There are therefore differences with regards to resources among and within participating countries.

Workers understand the work process and without their conscious and informed inclusion in control measures, the measures will not succeed. Workers need to be an integral part of the process of dust control.

The course emphasized the central importance of engineering controls (primary prevention) for control of dust at the source.

The facilitators provided a striking example of lack of competitiveness and great willingness to share information and resources without these being linked to financial gain. This was a refreshing and enriching experience for participants.

The time spent socially with the facilitators and fellow participants was of great value in clarifying points and in learning about each others' countries. Social events should therefore be planned as integral parts of the course.

## Feedback from participants

The feedback on the course was enthusiastic and very positive.

## Policy Implications

Government Departments need credible information on which to base decisions for factories, plants or mines where exposure to airborne dust is taking place. It is foreseen that the PIMEX Method will assist with the evaluation of exposure at workplaces and facilitate the process of arriving at informed decisions with regards to dust control policies.

## Teaching and curriculum development

It is an ongoing challenge to develop OHS training tools that transcend language and education barriers, in particular the problem of variation in literacy levels.

A visualization tool such as the PIMEX method and the course material provide powerful education and training tools that can be used to teach workers from different language backgrounds or different literacy levels.

The PIMEX Method is a most innovative means of raising awareness. The immediate feedback and location to the source of exposure makes it one of the most powerful methods to control dust. It will be useful in teaching especially in analysis of problems to incorporate in design.

Participating lecturers were confident that they will use the course package for teaching purposes. Some of them are interested in buying the equipment with other partners.

## Research

The PIMEX method and the course material are good tools for lecturers and students to use as part of their research projects.

The Pimex Method in action during the work visit to the bakery was a real eye opener. Bakers asthma is common in the bakery sector. A research project has been started and the course as well as the course information has already assisted with brainstorming and networking for the research. Information gathered from the research will be used for intervention purposes. Staff members at the bakery were in a position to see first hand where they can improve on dust control efforts.

In the mining sector the course material will be useful for further research and intervention on the elimination of silicosis. Course material will be extremely useful for Masters courses and will be used for a planned copper and arsenic intervention study.

## Informal sector

Course participants who have done work in the informal sector considers the visualization method to be a useful tool for teaching, for awareness raising and for preventive purposes in the sector. Given the absence of OHS laws and regulations in the informal sector, the marked variation in the nature of exposures, with women and children often the worst affected, the course information will be very suitable for intervention purposes but also to gather information to influence policies.

## Recommendations

1. As part of building and strengthening collaborating centres internationally, the NIWL, FIOH and the WHO should consider running the course, once off, in selected different regions to strengthen preventive dust control measures globally. Based on the experience of the current course it is important for the facilitators to do the initial training and help to establish a core of teachers familiar with the methods under discussion.
2. Several participants expressed the need for a course on dust measurement as a follow-up to the airborne dust course

3. It is recommended that there be a follow-up course preceding the 2005 IOHA 6th International Conference which will take place in Pilanesberg National Park in South Africa. This conference provides an ideal opportunity to consolidate the current pilot airborne dust course and provide participants and others from Southern Africa with the opportunity to present information on the practical interventions undertaken as well as possible training in dust measurement techniques.
4. That there be ongoing support with regards to information and advice for different institutions keen to implement the methods learnt during the course and that there be some discussion in the different institutions about starting and maintaining An Airborne Dust Control Network.
5. Much interest was expressed in the use of visual media in getting OHS messages across for teaching and dust control purposes. This could be considered as part of a structured input on Day 3 of the course.
6. A short video of the current course will provide amore inclusive and beautiful reflection of what took place than what can be described in a written report.
7. For future courses the suggestion is that participants and facilitators discuss the importance of speaking very slowly and to factor in additional time on a daily basis to allow for clarification or to repeat questions and answers.

## One year later.....

It is just over a year since the completion of the workshops on airborne dust control in South Africa. There have been a number of very positive developments related to the workshops. These include the following:

1. A workshop was conducted in Kitwe in Zambia to discuss the problem of silicosis in the "Copper Belt" region and to share information about dust control measures and medical surveillance. Participants from the airborne dust control workshops participated in the workshop on Zambia as well.
2. Several participants from the airborne dust control workshops use the course material on a regular basis to run weekend courses on dust control or to teach at tertiary institutions.
3. Participants from South Africa have played an important and informed role in provincial workshops organized for the development of a National Programme for the Elimination of Silicosis.
4. The list of names of participants (database) has been an important networking resource in occupational health and safety. It is foreseen that this resource will continue to be of great value in the further dissemination of information and in skills development in dust control methods and in the strengthening of occupational health and safety.
5. A Video of the course material including the pilot workshop experience is being finalized for use by the WHO globally.

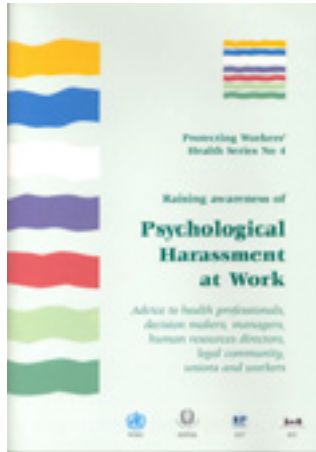
## Conclusion

There is great value in international collaboration where experiences and knowledge is shared and where we learn from the strengths and the challenges facing different countries in their quest for a healthier and safer work environment. This sharing of information and experiences is more and more taking place on the basis of equality and in the spirit of addressing global problems in an informed manner. It is foreseen that the networking that has started with the current course will be strengthened and consolidated in the coming years. The WHO Collaborating Centres are playing a unique role in facilitating this all important networking process.

## Raising Awareness of Psychological Harassment at Work

*Evelyn Kortum (kortummargote@who.int), Occupational & Environmental Health Programme, Occupational Health Team, World Health Organization, Geneva, Switzerland*

Psychological harassment, mobbing or workplace bullying are terms which all refer to the same phenomenon, respectively that negative



actions and practices are directed against one or more persons are unwanted. Such situations include one or more perpetrators and one or more victims. Effects are often mirrored in a person's deteriorating psychological and/or physical health, in financial losses for the company, and in increasing social costs. Stress and mobbing are intrinsically interrelated, as a mobbing atmosphere increases stress levels through the working environment, including observers

(1).

It is all the more worrying that psychological harassment is widely perceived as being on the rise at our workplaces. About 10% of the European Union's working population has experienced physical or psychological harassment in their place of work. A similar percentage report themselves to be aware of the existence of physical violence in their place of work, according to a report by the European Foundation for the Improvement of Living and Working Conditions, the Dublin-based EU Agency (2). One issue to be raised in this context certainly is the increasing awareness of what psychological harassment constitutes. Another one is that we are confronted with an increasingly fast-changing world in our workplaces in terms of demands and requirements. These often call for a great potential for adaptation, flexibility and high performance. Pressure and competition resulting from this situation, which is underlined by potential problems in the work organisation and environment, may lay the fertile ground for psychological harassment. Employers and employees should collaborate to avoid such problems or to solve existing ones. However, employers need to provide the framework which promotes an organisational culture that does not accept psychological harassment, and this has to be underlined by a sound company policy.

The ISPESL/ICP Consortium for the WHO Collaborating Centres in Occupational Health, Milano, Italy, together with the Institut Universitaire Romand de Santé au Travail, Lausanne, Switzerland, produced a booklet addressing this complex issue in an easily understandable format. This booklet was published as number 4 in the WHO Protecting Workers' Health series and is entitled: *Raising awareness of psychological harassment at work*. It offers advice to health professionals, decision makers, managers, human resources directors, the legal community, unions and workers.

This booklet offers explanations of this phenomenon by

- comparing 'healthy conflicts' with mobbing situations
- drawing out the effects on health and quality of life, as well as social costs
- explaining potential risks which prepare the ground for mobbing (management style, work organisation and environment)

- providing practical advice on prevention, recognition, and actions.

The booklet has become very popular due to its clarity and its awareness-raising potential. The original Italian version was translated into English, French and Spanish. In addition, our Collaborating Centres in Japan and Bulgaria are undertaking translations into their local languages.

Collaboration on this subject has been truly international, as ICP (Clinica del Lavoro 'Luigi Devoto') also agreed to undertake the qualitative analysis of the recent harassment survey organised by the Staff Association at WHO headquarters. This shows the devotion of our colleagues in the Collaborating Centres beyond the borders of the Collaborating Centre Network. In the near future, we are proud to say that the booklet will be part of every WHO staff member's organisational documentation.

It is a positive and encouraging development that levels of understanding and awareness are gradually converging across Member States (2), and also within the new candidate member states. In a recent report by the National Institute of Occupational Safety and Prevention (ISPESL), it was stated, for example, that 73% of the respondents in the new candidate countries considered stress, burnout and bullying as resulting from poor work organisation. It was also found that mobbing was considered more widespread than burnout (3).

### References

- (1) Vartia, Mal, Consequences of workplace bullying with respect to the well-being of its target and the observers of bullying. *Scand. J Work Environ. Health*, 27, 1, 63-69. 2001
- (2) Di Martino V., Hoel H. and Cooper C. L., Preventing violence and harassment in the workplace (report). 2003
- (3) ISPESL, Stress at Work in enlarging Europe, edited by Sergio Iavicoli. ISBN 88-89216-03-4. 2004

## WHO Training and Educational Activities via the Network of Collaborating Centres in Occupational Health

*Evelyn Kortum (kortummargote@who.int), Occupational & Environmental Health Programme, Occupational Health Team, World Health Organization, Geneva, Switzerland*

### Introduction

In this fast changing world, which has become a reflection of globalisation processes and increasing internationalisation, occupational health and safety experts meet the challenge to adapt to and develop in this increasingly complex world of work. At the same time they are required to deal with the inefficiencies of existing systems in their countries.

Training and educational activities have always been important to WHO in the pursuit to protect and promote the health of the workers worldwide, as they provide the basis for the transfer of knowledge and practices. More particularly, for the benefit of the workers most at risk and least protected, the focus of the Occupational Health Team has been on the transfer and translation of current knowledge and capacity to the developing countries and countries in transition. More than the generation of basic scientific knowledge, the primary aim is and has been to make the current state of knowledge available to those who have currently no access. Networking and partnership arrangements among occupational health institutions in developing, industrialising and industrialised

countries provide a great potential for the transfer of knowledge and practices, for training and implementation, as well as for the development and implementation of national policies. Considering that worldwide connections to the internet are increasing by the day, online courses and the availability of CD-ROMs play a more and more important role.

Of the Task Forces referred to in the introductory article of this Special Edition, Task Forces 11 and 12 are of particular relevance to training and education. Task Force 11 on training of occupational health and safety personnel was established to ensure a) harmonized contents of various curricula in occupational health and safety, b) the full utilization of programmes and materials already available, and c) sufficient numbers of trained experts in the field. And Task Force 12 promotes the access to information and training opportunities for experts and students worldwide via the internet.

In the following, examples of training and educational activities undertaken via the Network of Collaborating Centres in Occupational Health are presented. Without the contributions of the Collaborating Centres, these training and educational products would not exist.

### **Dust control courses**

Under the WHO/ILO African Joint Effort (AJE)<sup>1</sup>, pilot dust control courses were held in Cape Town and Johannesburg, South Africa, in March 2003. The courses were organised by the University of Cape Town and facilitated by staff from the National Institute for Working Life (NIWL), Sweden and the Finish Institute of Occupational Health (FIOH). All three institutes are WHO Collaborating Centres in Occupational Health. The pilot dust control courses are an excellent example of international collaboration where the WHO under the umbrella of the AJE provided support throughout for the coordination of the courses.

The participants in the dust course are contributing to the South Africa National Programme on Elimination of Silicosis in a major way. This is one of the great successes through international collaboration. A scientist involved from Cape Town University wrote to us: "...we are busy running the first certificate short course for factory inspectors in their role in the elimination of silicosis... We have been extremely busy developing and delivering this course, but it has amazing rewards and possibilities for primary, secondary and tertiary prevention of silicosis and for occupational health and safety."

An additional positive development is that in the near future, the pilot dust control course material presented in South Africa will be developed for use globally by the WHO as training material on dust control. The NIWL, the FIOH, and the WHO will run three dust courses in different regions (train the trainers), using events like the 2005 IOHA 6th International Conference. These events are organised within the ILO/WHO Global Campaign on the Elimination of Silicosis (see also Task Force 4).

### **Online training**

Long-distance educational programmes are ideally suited to reach wide student audiences at low cost, and have the potential to address the need for occupational health and safety training, internationally. The variety of experiences of the student body is bound to broaden the perspectives of other students. Long-distance courses give students the opportunity to follow their paid employment while obtaining diplomas and/or master certificates. In this way, local expertise can be nurtured to address local problems. Online training certainly is a route to global education worth pursuing in the present and the future.

Within the Network of Collaborating Centres, there are good examples of ongoing projects. One of these is, 'Online training in occupational health in French'. This project is being led by the Institut National de la Recherche Scientifique (INRS) in Nancy,

France, and programmes are widely implemented in many francophone African countries. The Centre assembled the diversity of programmes available onto one website ([www.grand-est.nancy.inserm.fr/who\\_och/onlinefree.htm](http://www.grand-est.nancy.inserm.fr/who_och/onlinefree.htm)).

Only recently, the Institute of Work, Health & Organisations at the University of Nottingham, UK, developed an e-learning MSc/Diploma in Occupational Health Psychology. The programme will commence in January 2005 and aims at European and international students. An additional MSc/Diploma in Occupational Health and Safety Leadership will be available from September 2005. This is an executive part-time course for established managers, applied psychologists or occupational health and safety practitioners.

### **Multi-disciplinary training modules**

The University of Illinois at Chicago developed a three-module multi-disciplinary curriculum in occupational health for use in continuing educational training in industrializing countries. The training modules comprise agriculture, manufacturing and the service sector. The training modules have been pilot-tested in South Africa, Ukraine and Turkey. Additional testing will be done in Africa, as a contribution to the WHO/ILO African Joint Effort and support training courses are planned in four Asian countries later in 2006. The curriculum will eventually be distributed on a CD-ROM, free of charge to carry out national-level training.

### **Industrial hygiene modules**

Industrial hygiene is still in its initial phase and a set of training modules is under development by the Institute of Occupational Health Sciences in Switzerland. This course will in the first instance be produced in French. Also these training modules will be available and distributed on CD-ROM and will be implemented through the upcoming Collaborating Centre in Benin with support of an industrial hygienist supported by WHO.

The South African National Institute of Occupational Health in Johannesburg developed a masters course in occupational hygiene (with a diploma option). This group encountered a specific problem which could be solved via international collaboration and support.

### **Training for health care workers**

In the area of child labour (see also Task Force 3) it is planned to develop training materials for health care workers (Task Force 5). These will aim at recognizing early signs and symptoms of hazardous child labour in a health care setting.

A pilot project with a strong focus on training is being developed to address the problem that 40% of Hepatitis B, 40% of Hepatitis C and 2.5% of HIV/AIDS in health care workers around the world are due to needlestick injuries (World Health Report, 2002). The healthcare industry has not sufficiently recognized the hazardous nature of the work environment.

A project, which started in 2003 with funding from NIOSH, is being implemented by WHO (HQ, Regional and country offices), WHO Collaborating Centres, and the International Council of Nurses (ICN) in South Africa, Tanzania and Vietnam. It is based on the WHO Toolkit entitled "Behaviour Change Strategy to Achieve a Safe and Appropriate Use of Injections". The Toolkit provides technical and policy guidance to health-care workers, administrators and politicians to promote injection safety.

Training manuals for trainers and a guideline for country and institutional needlestick injury reporting and surveillance system in health care workers are being developed, translated and disseminated. A train-the-trainer manual for health care workers, infection control committees and institutions on prevention of needlestick injuries will be produced. Guidelines for post-exposure prophylaxis and the use of anti-retrovirals, and for surveillance of needlestick injuries will also be produced.

## Conclusion

Training and education is an area which is developing to the satisfaction of all key players. In addition, the possibilities of the internet in providing long-distance training courses is an exciting and promising development and a means to reach wide student audiences at low cost. The training and educational activities mentioned in this article consist of a selection of already implemented or planned training and educational programmes through international collaborative efforts, of which some results have already been brought to occupational health and safety professionals and workers in under-served regions of the world. Enthusiastic partners and successes confirm that this work is on the right track to contributing to and addressing the main and ambitious goal of protecting and promoting the health of the workers worldwide.

## Economic Evaluation of Interventions to Reduce Levels of Exposure to Occupational Risk Factors

*Marilyn Fingerhut (maf2@cdc.gov)*

*NIOSH, USA*

In addition to determining the contribution of risk factors to the global burden of disease, the World Health Organization also published in the World Health Report 2002 some cost-effectiveness studies for interventions to reduce exposure to the risk factors (1). These studies evaluated the costs of interventions and the resulting gain in health.

As noted in another article in this issue, the WHO comparative risk assessment concluded that about 37% of back pain globally is due to occupational risk factors. Thanks to the work of colleagues at the University of Massachusetts at Lowell (UML), a cost-effectiveness study of interventions to reduce occupational back pain was reported for three WHO regions. A plea by WHO headquarters staff to the CCs for an economist was answered by UML, and Dr. Supriya Lahiri came to Geneva to learn the WHO-CHOICE economic model developed by Murray et al, 2000. Dr. Lahiri returned to UML and worked with TNO in The Netherlands and a team of UML experts in ergonomics and silicosis in order to carry out the cost-effectiveness studies of workplace interventions to reduce back pain and to reduce silicosis. Without the work of these CCs, the cost effectiveness work would not have been accomplished.

The WHO economic models were used to calculate costs of interventions and gains in health in three WHO geographic regions that illustrate different levels of development. The analysis found that the most effective workplace intervention to reduce back pain is a full ergonomics program that includes engineering controls and training, offering a 74% reduction in back-pain incidence. Lesser benefits are obtained by engineering control (56% reduction), and by training (20% reduction). The full ergonomics programs were found to be cost-effective in all three regions for their health effects alone, without even considering the possible increase in productivity that could be brought about by the interventions (1).

Silicosis is a disabling and often fatal workplace lung disease caused by inhalation of silica dust. The high-risk sectors of the economy include construction, mining and mineral processing, foundries, and the manufacturing of pottery and glass. Dr. Lahiri and the

UML team conducted a second study to evaluate the cost-effectiveness of alternative interventions to reduce silicosis in developed and developing nations. The interventions included engineering control interventions that protect many workers (substitution; wet method; local exhaust ventilation; total plant ventilation); and worker training plus personal protective equipment, an intervention that protects only the individual worker. The study concluded that engineering controls in both developed and developing regions are the most cost effective interventions with expenditures of between I\$ 105 and I\$ 109 per healthy year saved in the two regions. This level of expenditure is considered to be very cost effective and should be the first choice where resources are scarce.

Because cost-effectiveness studies using the WHO model measure only health gains, and because the decision making power regarding occupational risks lies with the employer, we wanted to undertake a type of economic evaluation that measures all costs paid by an employer to put in place interventions to reduce back pain and all costs avoided (i.e. net-costs). This type of economic evaluation measures monetary savings through avoiding sick days and by the increased productivity of a healthier workforce, for example. Cost savings motivate employers to put interventions in place. Jos Mossink of TNO in The Netherlands had earlier written for WHO the booklet, "Understanding and Performing Economic Assessments at the Company Level" (2), which provided a context for engaging further into the net-costs effort.

Headquarters staff again contacted CCs and a net-costs project was initiated by Dr. Supriya Lahiri and the University of Massachusetts at Lowell, with assistance from TNO in the Netherlands, and the National Institute of Occupational Health in India. This effort resulted in a model and data collection tool that will soon be published. In an effort to encourage economic evaluation in workplaces, WHO and NIOSH are co-organizing a conference in November, 2004 to bring together experts from developed and developing nations to learn about five economic models in use at company level and to design demonstration projects to utilize these or new hybrid models in companies, particularly in small and medium enterprises. It is hoped that simple tools that allow companies to conduct economic evaluation will persuade employers of the financial benefit of keeping workers healthy. This is a goal of Task Force 14 (Economic Evaluation) in the Global Network 2001 - 2005 Work Plan.

1. WHO, 2002 WHO World Health Report, 2002. Geneva

2. Mossink J. Understanding and Performing Economic Assessments at the Company Level, in Protecting Workers' Health Series No 2, WHO Geneva 2004

## Contribution of Occupational Risk Factors to the Global Burden of Disease

Marilyn Fingerhut (*maf2@cdc.gov*)

NIOSH, USA

The World Health Organisation undertook a Comparative Risk Assessment (CRA) to estimate the contributions of 26 risk factors to the overall global burden of disease (GBD). Technical units throughout WHO were able to be part of the CRA if they could provide global data on exposures and levels of risk according to the CRA protocol. Exposure and risk data were fed into a common model, with the intent to allow decision makers to compare the contributions of various risks to major disease and injury outcomes.

The Occupational Health Unit wanted to have occupational risks included, so headquarters staff contacted the WHO Collaborating Centre experts to invite their collaboration. Headquarters staff (Drs. Deborah Nelson, Annette Pruss-Ustin, Marilyn Fingerhut and Carlos Corvalan) worked with colleagues Dr. Marisol Concha from the Asociacion Chilena de Seguridad (ACHS) in Chile, Dr. Timothy Driscoll and Dr. James Leigh, formerly of the National Occupational Health and Safety Commission (NOHSC) in Australia, Dr. Laura Punnett of the University of Massachusetts at Lowell, USA, and Dr. Kyle Steenland of NIOSH, USA. Additionally, requests were made of all CCs to identify published and 'grey' data on exposures in their countries, and reviewers of the chapters were obtained from some CCs. The Global Burden of Disease effort is included in Task Force 15 of the WHO Global CC Network 2001-2005 Work Plan. This work forms the basis for priority setting for occupational health programs globally and for strengthening occupational health within WHO. Without the efforts of the CCs, the CRA analysis of occupational risk factors would not have been conducted.

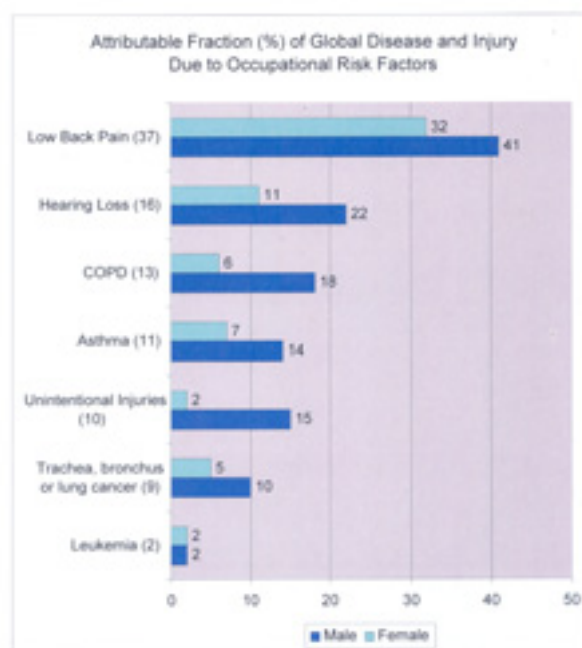
The 2002 WHO World Health Report summarizes the contribution to the global burden of disease of five widespread workplace risk factors: carcinogens, airborne particulates, noise, and risk factors for back pain and injuries<sup>1</sup>. Additional, more detailed publications are in process. As shown in Figure 1, the study concluded that workplace risk factors make a major contribution to global illness and injury, including :

- 37% of back pain
- 16% of hearing loss
- 13% of COPD
- 11% of asthma
- 10% of injuries
- 9% of lung cancer
- 2% of leukemia.

WHO also made a special risk analysis of Hepatitis B, Hepatitis C and HIV infections among health care workers due to contaminated sharps, such as syringe needles, scalpels and broken glass (1). This analysis illustrates the general problem that high risks exist in the small worker population that has exposure. WHO found that among the 35 million health workers worldwide there were 3 million

percutaneous exposures to bloodborne pathogens in 2000. This is equivalent to between 0.1 and 4.7 sharps injuries per year per health worker. WHO concluded that of all the Hepatitis B and of Hepatitis C present in health care workers, about 40% was due to sharps injuries, with wide regional variation. WHO also found that between 1 and 12% of HIV infections in health care workers in different regions was due to sharps injuries.

Because of the lack of global data, other risk factors widespread in workplaces had to be excluded that cause reproductive disorders, dermatitis, infectious disease, coronary heart disease, intentional injuries, musculoskeletal disorders of the upper extremities, and many cancers. Psychosocial risk factors, such as workplace stress could not be studied, nor could pesticide, heavy metal, or solvent exposures. The analysis also excluded children under 15 who work, due to the absence of adequate global data. Overall, therefore, the WHO global burden study included and provides a detailed analysis for only about 800,000 (40%) of the 2 million deaths estimated by ILO<sup>2</sup> to be due to workplace risks each year.



<sup>1</sup> WHO 2002 The World Health Report 2002: Reducing Risks, Promoting Healthy Life, WHO Geneva

<sup>2</sup> International Labour Organisation (ILO) 2002 The International Labour Conference, Report VI. Decent Work and the Informal Economy. ILO, Geneva

## Thirteenth Session of the Joint ILO/WHO Committee on Occupational Health

Greg Goldstein ([goldsteing@who.int](mailto:goldsteing@who.int))

WHO Occupational Health Unit, Geneva

Cooperation between WHO and ILO extends to collaborative work with the Global Network of WHO Collaborating Centres. An outline of the cooperation is presented in this summary report of the Thirteenth Session of the Joint ILO/WHO Committee on Occupational Health, held at the ILO headquarters in Geneva, from 9 to 12 December 2003. The agenda of the meeting, as determined by the Governing Body, and with the agreement of the World Health Organization (WHO) was as follows:

1. Integrated approach to occupational safety and health.
2. Occupational safety and health management systems.
3. Advice on priority fields in occupational health.

The Joint Committee is an expression of the determination of the ILO and WHO to cooperate in mobilizing the international community at all levels to achieve safe and healthy workplaces. Many participants emphasized that, by working together in a coordinated and complementary fashion, the ILO and the WHO could make a significant difference to making healthy workplaces a reality. In the last 12 sessions, the Committee had covered a variety of topics including education and training in occupational health, safety and ergonomics, scope and organization of occupational health, reporting of occupational diseases and occupational exposure assessment and establishment of permissible limits. Of the agenda items for this Thirteenth Session, those of the integrated (or strategic) approach and of occupational safety and health management systems were very important, and reflected the need to promote safety and health as an essential function of good management. These also reflected changes in member States, particularly the industrialized countries, from the prescriptive style of occupational safety and health legislation towards the more goal-setting standards and voluntary initiatives.

The WHO placed emphasis on work in the field of occupational health on three major elements: (1) the provision of evidence for policy, legislation and support to decision-makers; (2) the provision of tools and support for infrastructure development, including capacity building, human resources development and information dissemination; and (3) activities aimed at protecting and promoting workers' health. The important challenge was moving from knowledge to action.

Challenges that lay ahead include the need adequately to address health and safety in the informal economy, the needs of agricultural and migrant workers and vulnerable groups (for example children, migrant workers, and elderly workers), protecting illiterate and uneducated workers, preventing injuries at work including road traffic injuries, developing effective approaches to address preventable occupational diseases such as silicosis and chemical poisonings and the development and application of practical preventive approaches such as control banding. A particularly important issue from the WHO perspective was the need to protect health-care workers.

The Committee recognized the need to raise occupational health issues at the global, regional and national levels, and that the development of national OSH programmes was essential to achieving this goal. The Committee called for special attention to be given to the needs of vulnerable groups and the growing informal sector.

It was agreed there should be top-level commitment within the WHO and ILO for collaboration between the two organizations on occupational health, and this should be communicated to the regional and national levels.

The Committee recommended that WHO and ILO collaboration

should focus on the following key areas:

### (1) Guidance and support for national OSH programmes, including:

- providing basic occupational health services;
- promoting OSH management systems and tools, including control banding;
- developing national profiles and indicators;
- assessing the cost effectiveness of OSH interventions;
- establishing effective enforcement agencies.

### (2) Enhancing regional collaboration and coordination, including:

- the development and dissemination of models for cooperation, for example, the Intensive Partnership in Africa;

### (3) Coordination and enhancement of information and educational programmes and materials, including:

- the development of a joint internet-based global portal;
- statistics.

### (4) Awareness-raising activities and instruments, such as campaigns, events and special days.

The Committee recommends that special attention should be paid to the following global occupational safety and health issues in future ILO/WHO collaboration:

- the elimination of silicosis and asbestos-related diseases;
- ergonomics;
- violence at work;
- list of occupational diseases;
- occupational injuries.

A complete copy of the meeting report is being posted on the ILO web-site, where details and background papers are available. Direct link: <http://www.ilo.org/public/english/protection/safework/health/session13/index.htm>

## Training Tool for Dust Control

Dr Ing-Marie Andersson ([ing-marie.andersson@arbetslivsinstitutet.se](mailto:ing-marie.andersson@arbetslivsinstitutet.se)), Mr Lars-Erik Bystöm ([lars-erik.bystrom@arbetslivsinstitutet.se](mailto:lars-erik.bystrom@arbetslivsinstitutet.se)), and Dr. Gunnar Rosén ([gunnar.rosen@arbetslivsinstitutet.se](mailto:gunnar.rosen@arbetslivsinstitutet.se)), Swedish National Institute for Working Life, *A WHO Collaborating Centre in Occupational Health*

Dr Ing-Marie Andersson, Mr Lars-Erik Bystöm and Dr. Gunnar Rosén from the Swedish National Institute for Working Life produced a training package based on the WHO document "Hazard Prevention and Control in the Work Environment: Airborne Dust", in collaboration with Mr. Hannu Riipinen from the Finnish Institute of Occupational Health. The package consists of the main document, lecturing and group work material, and seven video films delivered on four CD-ROMs. Around 100 video illustrations and other materials have been added to the text. Visualisation tools clarify the message, reduce the step from airborne dust problems to effective control, and have two main advantages: a) the message is understandable independent of language and educational level; and b) they can serve as a common basis for discussion.

The training tool was used during two pilot courses arranged in South Africa in 2003. The courses were organised by Dr Sophia Kisting from the University of Cape Town. The target group of the courses were trainers who used the training tool in many courses arranged locally subsequent to the pilot courses.

Based on the experiences from that work and the results of the evaluation, the Swedish Institute aims at further developing the training tool in close contact with WHO and the Finnish Institute of Occupational Health. Material will be added to facilitate its use without the presence of foreign lecturers. The target group is teachers in dust control, but also individuals that wish to use it for self studies. The material was presented during the European Collaborating Centre meeting in Sweden in September this year and is now available on CD-ROM.

## GOHNET Newsletter - Contributors' Information

### General

- GOHNET is a vehicle for information distribution and communication for all who are involved, active and interested in the subject areas of occupational health.
- The Editor reserves the right to edit all copy published.
- Contributors of all material offered for publication are requested to provide full names, titles, Programmes or Departments, Institute names, and e-mail addresses.

### Why write for GOHNET?

All experts have a professional responsibility to disseminate their views and knowledge. The Network of occupational health experts is constantly growing, and the Newsletter can therefore help you to reach a large audience in the occupational health community. This can help you to make new contacts, exchange views and expertise.

### What kinds of article do we publish in GOHNET?

Our diverse audience means that articles should be not only informative but also engaging and accessible for the non-specialist. We do not accept articles based on data that has not been accepted for publication following peer review. Such articles are more appropriate for submission to a journal. Articles may provide a broad overview of a particular area; discuss theory; add a critical commentary on recent articles within a GOHNET Newsletter; or debate applied, practical and professional issues.

You can view examples of issued Newsletters, which are available at <http://www.who.int/oeh/OCHweb/OCHweb/OSHpages/Gohnet/Gohnet.htm>

### How should I go about writing my article?

Articles should be written as for an intelligent, educated but non-specialist audience, as the majority of readers will not necessarily be familiar with the topic of any individual article. Articles need to be written in clear, non-technical language, and aim to engage the interest of the membership at large.

## CONTACTS

### WHO headquarters

([www.who.int/occupational\\_health](http://www.who.int/occupational_health))

Department of Protection of the Human Environment  
Occupational and Environmental Health Programme  
Geneva, Switzerland  
Fax: (41) 22 791 1383

e-mail: [kortummargote@who.int](mailto:kortummargote@who.int)

### WHO Regional Advisers in Occupational Health:

Regional Office for Africa (AFRO) ([www.whoafr.org/](http://www.whoafr.org/))  
Brazzaville, Congo  
Fax: (242) 81 14 09 or 81 19 39

e-mail: [pulet@afro.who.int](mailto:pulet@afro.who.int)

Regional Office for the Americas (AMRO)  
([www.paho.org/](http://www.paho.org/))

Pan American Health Organization (PAHO)  
Washington DC, USA  
Fax: (202) 974 36 63  
e-mail: [tennasm@paho.org](mailto:tennasm@paho.org)

© World Health Organization 2004

All rights reserved. Publications of the World Health Organization can be obtained from Marketing and Dissemination, World Health Organization, 20 Avenue Appia, 1211 Geneva 27, Switzerland (tel: +41 22 791 2476; fax: +41 22 791 4857; email: [bookorders@who.int](mailto:bookorders@who.int)). Requests for permission to reproduce or translate WHO publications – whether for sale or for noncommercial distribution – should be addressed to Publications, at the above address (fax: +41 22 791 4806; email: [permissions@who.int](mailto:permissions@who.int)).

The designations employed and the presentation of the material in this publication do not imply the expression of any opinion whatsoever on the part of the World Health Organization concerning the legal status of any country, territory, city or area or of its authorities, or concerning the delimitation of its frontiers or boundaries. Dotted lines on maps represent approximate border lines for which there may not yet be full agreement.

Sexist, racist and other discriminatory or devaluing language should be avoided.

Articles can be of any length from 800 up to a maximum of 2000 words (excluding references), double spaced, with complete references and a precise wordcount (excluding references). Relevant high- quality scanned image materials is also welcome.

### How do I submit my work?

Send your article as an attachment to [kortummargote@who.int](mailto:kortummargote@who.int), or post one copy to:

Evelyn Kortum – Editor of GOHNET  
World Health Organization  
C/o SDE/PHE/OEH, office L.125  
20 Avenue Appia – 1211 Geneva 27 – Switzerland

### Counterpoint articles

If you have a view on an article we have published, your best route is an e-mail or a letter to the Editor. If you wish to add a substantial amount of evidence on a significantly different angle, we welcome commentary pieces of up to 1000 words, submitted within two months of the original piece.

### Conference or workshop reports

Brief reports on conferences or workshops of interest to a wider audience (any length up to 700 words) should be sent, within a month of the event, to the Editor. Focus on what is new and of general interest, rather than including a lot of background information about the conference.

### Reference style

Below is an example of the reference style to be used:

1. Herbert R, Gerr F, Dropkin J. Clinical Evaluation and Management of Work-Related Carpal Tunnel Syndrome. *Am J Ind Med* 2000 37:62.
2. Pelmeur PL. Hand-Arm Vibration Syndrome. An Overview. In: *Hand Arm Vibration Syndrome*. HHSC Handbook No. 24. 1999. P 2.
3. Piligian G, Herbert R, Hearn M, Dropkin J, Lansbergis P, Cherniak M. Evaluation and Management of Chronic Work-Related Musculoskeletal Disorders of the Distal Upper Extremity. *Am J Ind Med* 2000 37:75.

Regional Office for the Eastern Mediterranean (EMRO)

([www.who.sci.eg](http://www.who.sci.eg))

Cairo, Egypt  
Fax: (202) 670 24 92 or 670 24 94

e-mail: [arnaouts@emro.who.int](mailto:arnaouts@emro.who.int)

Regional Office for Europe (EURO)

([www.who.dk](http://www.who.dk))

Copenhagen, Denmark  
Fax: (45) 39 17 18 18

Regional Office for South-East Asia (SEARO)  
([www.whosea.org/](http://www.whosea.org/))

New Delhi, India  
Fax: (91) 11 332 79 72  
e-mail: [caussyd@whosea.org](mailto:caussyd@whosea.org)

Regional Office for the Western Pacific (WPRO)  
([www.wpro.who.int/](http://www.wpro.who.int/))

Manila, Philippines  
Fax: (63) 2 521 10 36 or 2 526 02 79  
e-mail: [ogawah@wpro.who.int](mailto:ogawah@wpro.who.int)

Editor: G. GOLDSTEIN

Design: J-C Fattier

The mention of specific companies or of certain manufacturers' products does not imply that they are endorsed or recommended by the World Health Organization in preference to others of a similar nature that are not mentioned. Errors and omissions excepted, the names of proprietary products are distinguished by initial capital letters.

The World Health Organization does not warrant that the information contained in this publication is complete and correct and shall not be liable for any damages incurred as a result of its use.

Printed in Geneva, Switzerland

*Printed on paper made from managed softwood plantations, where at least one tree is planted for every tree cut down.*

If you would like to join the Global Occupational Health Network, please fill in the form below.

*Please print clearly or use a typewriter and send to the editor.*

Alternatively you may request a copy of the form by e-mail from [kortummargote@who.int](mailto:kortummargote@who.int) or consult our website for an electronic version:  
([http://www.who.int/occupational\\_health](http://www.who.int/occupational_health))

## Global Occupational Health Network (GOHNET)

### Survey

#### Application form for GOHNET membership

Name of Institution: .....

Mailing Address:

Street & Number: ..... P.O. Box\* .....

City ..... postcode: .....

Sector & Province\* .....

\* only include if necessary for mailing

Country: .....

Tel\*\* : ..... Fax\*\* : .....

\*\* Please include codes of country and town

E-mail(s): .....

Please indicate if you have access to the Internet:    yes     no

Do you have a Web address? If so, please state: .....

Do you have access to a computer with a CD-ROM reader?    yes     no

Contact person: First Name: ..... Family Name: .....

Title (Dr, Mr, Mrs, Ms, etc.): ..... Sex:    F     M

Organizational Position/Function: .....

Department: .....

Please state any area(s) of expertise which your organization would be willing to share: .....

.....

.....

Do you have training activities? If so, please describe: .....

.....

.....

How many staff work in Occupational Health your Organization? .....

Do you belong to any other health, safety or environmental networks? If so, please describe? .....

.....

.....

Efforts are being made to supply information in three languages. Please specify your preference:

English     French     Spanish

*(if certain materials are unavailable in the language of your choice, they will be supplied in English)*