

NEWSLETTER

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Letter from the Editor

Dear Colleagues,

For a long time all of us in occupational health have been aware of the tremendous “knowledge-application” gap between what is known by scientists and well-trained professionals in terms of hazard prevention and control, and what is actually translated into effective measures applied at the workplace level in a sustainable way. Unfortunately there are many obstacles between knowledge and its application and, in trying to identify them, one invariably comes across lack or insufficient political, shortage of human resources and insufficient availability of relevant information, among many others.

I was very happy to see, at the World Health Organization (WHO) meeting of Collaborating Centres for Occupational Health, people from all over the world working together towards the common goal of overcoming many of these obstacles in order to effectively protect the health and well being of workers.

As you go through this issue of our Newsletter, besides news on the above meeting, you will see many contributions that address matters directly related to these obstacles, in addition to many other topics of relevance for occupational hygiene practice.

The underestimation of occupational diseases and injuries is immense, which leads many decision makers to underrate workers’ health problems thus weakening political will to solve them. Therefore more efforts need to be placed on their correct estimation, and two notices in this respect from Dr Jukka Takala, EU-OSHA Director, presented in this issue are of great importance.

Another related subject is capacity building at the country level and, as you will see, one of the workshops that followed the WHO CC meeting dealt with this topic, including both availability of information and human resources development. In most countries, there is a shortage of adequately trained professionals, such as occupational physicians and nurses,

occupational hygienists, ergonomists and other members of the occupational health multidisciplinary team.

There is a particular need for strengthening the occupational hygiene component of occupational health, as it aims specifically at primary prevention, which is key to the effective protection of workers’ health. Fortunately, as you may see in this issue, there are many efforts towards education and training in this field, both at the national and international levels. Nevertheless, a greater impetus in this area is required. Exchanges of ideas and experiences on how to approach occupational hygiene training are very valuable and your comments in this respect will be most welcome.

I would like to make one last consideration. The other day I saw a worker on TV who said “the worst work is no work”, which is a reality that cannot be denied. More than ever, in these times of financial crisis, people are worried about unemployment. In my view, this situation places an even greater responsibility on those in charge of OH&S who must to ensure that economic concerns do not overshadow the need for healthy and safe workplaces, and that there is no slackening in the efforts to prevent hazards.

Dr. Maria Neira, Director, Department of Public Health and Environment, WHO, when speaking to participants at the WHO CCs meeting, emphasized that, in view of the challenges posed by the crises the world is facing today, there is a need to use resources more efficiently in order to ensure that the health of workers is adequately protected. She closed by saying “Yes we can !” meaning that the combined power of the CC Network will make it possible to achieve the goals of the WHO work plan on workers’ health in spite of increased constraints.

If asked if we can possibly overcome the existing obstacles to implement prevention worldwide, I would like to reply by borrowing this expression and say: “if all occupational health professionals join forces to amplify their strengths, overcome their weaknesses and complement one another, then, yes, we can”. I would like to add: “and let’s commit ourselves to do it !”

I take this opportunity to wish to all of you and your families a very Joyous Holiday Season followed by a New Year full of happiness and professional achievements.

Best greetings to all

Berenice Goelzer
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NEWS from the IOHA BOARD

Report from the meeting of the IOHA Board - 8 October 2009, Bilbao, Spain

1. The meeting was held in Bilbao, Spain, chaired by Dr Danilo Cottica (President) and attended by representatives of AIHA, the Australian, British, Canadian, Dutch, French, Japanese, Norwegian, Southern African, Swiss and Taiwanese organisations, with Sandi Atkinson and Pamela Blythe from the Secretariat in attendance and two representatives from the newly formed Spanish Society as observers. Apologies for absence had been received from ACGIH, the Brazilian, German, Irish, Hong Kong, Korean and Swedish organisations.
2. The IOHA Board was very kindly hosted by the *European Agency for Safety and Health at Work*. The Agency's Director Dr Jukka Takala joined part of the meeting as an observer and to explore the synergies between the two organisations. On the morning of 9 October, the Board heard four presentations from Agency staff on aspects of its work.
3. The President Dr Danilo Cottica delivered a presentation on behalf of the Italian Association's Organising Committee on the progress of the 8th International Scientific Conference, to be held in Rome, Italy, 28 September – 2 October 2010. The deadline for abstracts is 31 January 2010 and they can be submitted via the conference website www.ioha2010.org
4. A progress report on the 9th International Scientific Conference was submitted by the Malaysian Association who was unable to attend the meeting. The conference will mark the 25th anniversary of IOHA and will be held at the Kuala Lumpur City Centre (KLCC) Convention Centre, Malaysia on 5 – 7 March 2012. The Conference will be preceded by Professional Development Courses on 3 & 4 March 2012.
5. The Certification Schemes of the Swiss Society and the Norwegian Association were formally recognised by IOHA, and both organisations were congratulated by the Board. In addition the British Society's accreditation was renewed for a further five years.
6. For a long time now, IOHA has been actively collaborating with the group of people who have been working towards the development of international occupational hygiene training and qualifications. That group has now established itself under English Law into the Occupational Hygiene Training Association (OHTA) and IOHA has formally signed a Memorandum of Understanding with OHTA and agreed to contribute some funds for the development of OHTA's website. More information on this project will appear in the newsletter in due course.
7. At this meeting the Board began the process of reviewing the strategy for IOHA. The current strategy began in 2007 and runs until 2010, with the majority of its objectives now complete. In consultation with the Member Organisations a new strategy will be developed for 2011 to 2014.
8. A new page has been created on the IOHA website entitled 'International OEL Issues and Activities' where we hope to provide information on the issues and stimulate the discussion of approaches and solutions to the issues before the profession. If you wish to add information to this space please contact admin@ioha.net
9. The next meeting of the Board will be held on 23 May 2010 in Denver, Colorado, USA at the AIHce 2010.



Picture of the Board in Bilbao

8th IOHA International Scientific Conference – Rome 2010



8th IOHA International Scientific Conference
28 September – 2 October 2010
Rome, Italy – University Urbaniana

IOHA is pleased to announce that the deadline for submission of abstracts for the 8th International Scientific Conference has been postponed from the 1st of December to the **31st of January**.

The purpose of the Conference, entitled “*Health Work and Social Responsibility*”, is to discuss strategies for the decade 2010-2020 on how to protect the health of workers and to improve the quality of the work environment, in the perspective of businesses’ social responsibility and of sustainable development.

The conference will gather a group of international experts in occupational (industrial) hygiene and other fields dealing with prevention.

IOHA will be very glad to receive your contribution to ensure that occupational hygienists play a leading role in the new integrated markets of Environment, Health & Safety and to define methodologies and instruments tailored to suit Countries with different levels of development.

Click here to [submit your abstract](#)

The conference will last 5 days and will be structured as follows: plenary sessions in the morning and scientific parallel sessions morning and afternoon.

The provisional scientific programme is available on the Conference web site.

Click here to see the [Provisional Scientific Program](#)

To get more information about the Conference, please visit the conference web site www.ioha2010.org/, which will be regularly updated or contact info@ioha2010.org

Organizers:



NEWS from MEMBER ASSOCIATIONS

From BOHS, UK, and NVvA, The Netherlands

British-Dutch guidance on sampling strategy for exposure limits

Sent by: Trevor Ogden, Co-chair for BOHS, BOHS-NVvA Working Group on Sampling Strategy, E-mail: ogden@ogs.org.uk

A joint working group of the British and Dutch Occupational Hygiene Societies (BOHS and NVvA) has drafted guidance on testing compliance with exposure limits for airborne substances. The approach is particularly aimed at compliance with European Union legislation, but should be useful anywhere. The draft is

available for public guidance and comment at:

http://www.bohs.org/resources/res.aspx/Resource/filename/1596/11_Testing_Compliance_with_Occupational_Exposure_Limits_draft_guidance.pdf

The major problem with testing compliance is that a

statistically sound strategy requires far more sampling than most hygienists would consider to be practicable, so the draft emphasises that it is important to apply principles of good control before starting a big programme of measurement. The draft proposes a screening test of three samples to test whether compliance is likely, and then a fuller test to measure the inter- and within-worker variances. From these, two measures of compliance are calculated, one applying to the exposure group and the other to individual workers. The second is the more important and the harder to meet. The document also reviews three shorter tests, and explains their limitations.

The draft is available for comment until the end of December 2009. Comments based on workplace trials will be particularly welcome. We hope that it will be possible to present the results of the consultation at the BOHS conference at the end of April <http://www.bohs.org/standardTemplate.aspx/Home/Events/AnnualConference2010>.

An editorial in the November issue of Annals of Occupational Hygiene gives a fuller background and explanation of the proposals. This is available now at: <http://annhyg.oxfordjournals.org/cgi/reprint/53/8/775>

From AIHA, USA

AIHA Releases Comments on the "Nurse and Health Care Worker Protection Act of 2009" (July 15, 2009)

Sent by Melissa Hurley Alves, AIHA Communications mhurley@aiha.org

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The American Industrial Hygiene Association (AIHA) recently provided comments to Hon. John Conyers Jr. on HR 2381, "Nurse and Health Care Worker Protection Act of 2009," a bill amending the Occupational Safety and Health (OSH) Act of 1970. This legislation is being co-sponsored by Hon. Lynn C. Woolsey.

"AIHA has a significant number of members who are employed by or provide services to the health care industry," said AIHA President Cathy L. Cole, CIH, CSP. "The need to identify and apply methods to improve safe patient handling programs has been a recognized need ... progressive, proactive health care providers have achieved significant reductions in worker injuries and their related costs as a result of implementing effective and safe patient handling programs. Sadly, a high percentage of health care facilities have not yet decided to implement these programs."

Introduction of HR 2381 is a method to ensure that the safe patient handling issue is properly addressed. AIHA recently developed and adopted a position statement entitled "Safe Handling of Patients and Residents." The AIHA position statement is essentially in full accord with HR 2381 with the following two exceptions:

1. The scope of the legislation should be limited to workers in health care facilities at this time and not apply to health care workers in the home environment. While AIHA recognizes (as is evidenced in the position statement) that home health care workers are also exposed to significant ergonomic risk, equipment, and other control approaches are not

currently available to adequately reduce all of these exposures. Research should be funded and other efforts undertaken to fill this knowledge gap.

2. The time allowed to send safe patient handling incident reports to the Occupational Safety and Health Administration (OSHA) should be extended from one business day after request receipt to fifteen business days. The latter figure would be consistent with the requirement under OSHA 29 CFR 1910.1020, Access to Employee Exposure and Medical Records.

AIHA offered full assistance to Congress, OSHA, and others to deliver the standards, regulations, compliance assistance, and enforcement necessary to help achieve the mutual goal to provide workers and communities a healthy and safe environment and the prevention of occupational disease and injury.

The entire letter with AIHA's HR 2381 recommendations may be seen at:

<http://www.aiha.org/1documents/GovernmentAffairs/HR2381PositionConyers070709.pdf>

and the full position statement, at:

<http://www.aiha.org/1documents/GovernmentAffairs/safepatienthandling.pdf>

Sent by:

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The new Board of ABHO for the triennium 2009-2012 took office on 23 August 2009. The President, Directors and Board members are occupational hygienists with large experience; all of them work in governmental agencies, national and multinational companies and consulting firms specifically in occupational hygiene.



The new ABHO Board

ABHO has three Boards, namely:

- the Executive Board, with a President: José Manuel O. Gana Soto (consulting firm); Administrative Vice President: Gerit Gruenzner (Fundacentro, governmental research agency); Vice President for Research: Mário Luiz Fantazzini (Dupont); Vice President for Training and Education: Roberto Jaques (Petrobras); Vice-President for Public Relations: Maria Margarida T. Moreira Lima (Fundacentro), and, Vice-President for International Relations: José Pedro Dias Júnior (Johnson & Johnson).
- the Technical Board, constituted by the following occupational hygienists: Jose Gama Christo (consultant), Juan Felix Coca Rodrigo (Saint Gobain), José Luis Lopes (Cosan) and Milton Marcos Miranda Villa (3M).
- the Fiscal Board, constituted by the following occupational hygienists: Ana Gabriela Lopes Ramos Maia (ALCOA), Maria Sanches Cleide Oshiro (consulting firm) and Mauro David Ziwan (Office of the District Attorney for Labour Matters).

José Manuel O. Gana Soto, the new President, is one of the founding fathers of ABHO. He has a Bachelor's Degree in Chemistry and a diploma of expert in Industrial Hygiene from the Catholic University of Chile. Later on he graduated in Chemical Engineering in Brazil. He is one of the pioneers of Occupational Health in Brazil and was - for 11 years - the manager of the Division of Occupational Hygiene at Fundacentro, the national institution for studies and research on safety, hygiene and occupational health, and a WHO Collaborating Centre for Occupational Health.

During his time at Fundacentro, Gana Soto coordinated, in the late 1970s, a team of five professionals who were responsible for elaborating the first comprehensive occupational hygiene legislation in Brazil. On that occasion, the few existing occupational exposure limits (noise and heat) were updated and many others introduced. For the first time Brazil had occupational exposure limits for chemical agents. This new legislation was a milestone in the development of occupational hygiene in Brazil. In order to allow for greater uniformity in the application of the new legislation at the national level, he also coordinated the development of the first "Technical Occupational Hygiene Standards" and the first "Safety Data Sheets for Chemicals" at the governmental level.

During his 15 years with ABHO, Gana Soto has always played important roles in the direction of the association. Now, as President, he sees two main challenges: the legal recognition of the profession of occupational hygienist and the strengthening the role of ABHO in respect to education and training in this field.

Regarding the recognition of the profession, the association began, back in 2003, the process of professional certification and its maintenance. This work, which aims at enhancing the performance of the occupational hygienist, has improved the profile of occupational hygienists who are members of and certified by ABHO and also increased their recognition by society in general. Nevertheless, the profession still lacks legal recognition in Brazil, and to achieve this goal is the main mission of the current administration.

As to technical developments, ABHO intends to continue the translation of the ACGIH® TLV's® into Portuguese and increase the number of its technical publications in Portuguese, which are much respected in view of its sound reputation.

Concerning education and training, many courses are traditionally given during the ABHO Annual Conference. However, the present ABHO Board believes that more courses, as well as seminars and expert meetings, should be held throughout the year in order to better disseminate knowledge on current occupational hygiene

issues around the country. ABHO aims at acting in collaboration with IOHA concerning occupational hygiene training by promoting the translation into Portuguese of training modules developed by IOHA.

These are the main goals that the new Board will make every effort to achieve in the next 3 years.

New address for ABHO: Rua Cardoso de Almeida, 167, cj. 121 05013-000 São Paulo, Brazil Site: www.abho.org.br

From JAWE, JAPAN

Japan Association for Working Environment Measurement (JAWE) - First Central Symposium on Work Environment Measurement and Evaluation of its Result with Respect to Chemical Substances and Dust, September 2009

Sent by Masayoshi Karasawa, Special Adviser, JAWE

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The Japan Association for Working Environment Measurement (JAWE), whose Chairperson is Mr. Shigeru Oshita, Managing Director, General Manager, Personnel & Labour Relations Division, Nippon Steel Corporation, held the above-mentioned Symposium on 9 September 2009, in Tokyo. This Symposium was organized for the first time, by the Headquarters of JAWE as the part of the 23rd Nationwide Campaign for Promotion of Working Environment Measurement and Evaluation of its Result, with the support of the Ministry of Health, Labour and Welfare, Japan. It was planned to deepen the understanding of the importance to conduct working environment measurements and evaluate their results properly, in order to prevent occupational diseases caused by toxic chemical substances and dusts. The Symposium consisted of two parts, namely, two kinds of special lectures and a Panel-Discussion (see photo).

The first special lecture by Takashi Numano, PhD, CIH



Panel

(Certified Industrial Hygiene Consultant), CSP (Certified Safety Professional Consultant), was entitled "Work Environment Measurement and Evaluation of its Result as well as International Trend with respect to Risk

Assessment and Risk Control/Management of Chemical Substances". In his presentation, he quoted Alice Hamilton (1869-1970), an occupational physician in the United States, and a distinguished researcher in the field of occupational health whose pioneer work has had universal impact (see photo), emphasizing – as Hamilton indicated in her 1941 article, that almost all industrial poisoning is caused by the inhalation of airborne toxic substances in work places. He also emphasized the three kinds of control measures, namely control of the working environment, control of work methods and health management, as well as the two kinds of supporting measures, namely, establishment of appropriate organization for good management of occupational health and occupational health education.



Caption: Alice Hamilton, M.D.

With regard to exposure assessment, he stated that, while in the West the tendency is to attach greater importance to measuring workers' personal exposure to toxic substances by using personal samplers, in Japan, the tendency is to attach great importance to measuring their airborne concentration in the working environment. Each of these methods has advantages and disadvantages, as well as limitations, which have to be clearly understood in order to accurately evaluate

workers' exposure. In addition, he introduced the related provisions of the Occupational Safety and Health Act (OSHA) in the United States, the ALARP principle (that is, to reduce risks As Low As is Reasonably Practicable) with respect to assessment and control of occupational exposure to toxic chemicals, in European countries and the United States, as well as the relevant provisions in the Chemical Safety Report of the EU REACH regulation.

The second special lecture by professor Toshio Nagoya, School of Creative Science and Engineering, Waseda University, was entitled "Effective Application of real-time monitoring instruments in order to monitor dust and/or carbon monoxide in related workplaces". In his presentation, which included slides and videos, he showed:

- a practical example to monitor airborne dust around operations, such as arc-welding, concrete spraying in tunnel construction sites and others, with an improved real-time Dust Monitor (improved type of PD-2), equipped with a particle size selective air sampler with 4µm 50% cutting type, in accordance with the international standard concerning inhalable dust;
- a practical example to monitor airborne carbon monoxide in gas welding and gas cutting operations, with a new type of real-time carbon monoxide monitoring instrument, which was recently developed by a manufacturer of working environment measurement instruments.

He stated that these real-time monitoring instruments are very useful and efficient in order to show workers, who are engaged in these tasks, their real-time exposure level to dust or carbon monoxide, as well as the effectiveness of the dust masks, which they are wearing. At the end of his lecture, he recommended that, whenever feasible, real-time monitoring instruments should be used in workplaces, in a positive manner, aiming at triggering action to improve work environment control, thus preventing occupational diseases caused from toxic substances or dusts.

The Panel-Discussion followed and the theme was "Autonomous and Sound Management of Toxic Substances by Enterprises based on Hazard Identification, Exposure Assessment and Risk Characterization of Chemical Substances as well as Good Practices". There were five presentations in this Panel, by four participants from enterprises (three of them were from the chemical industry and one, from the steel industry) and one participant from a working environment measurement agency. There were also two comments by Professor Emeritus Haruhiko Sakurai, Keio University and technical

adviser to the Japan Industrial Safety and Health Association (JISHA), as a master of the Panel discussion, and by Ms. Noriko Kamezawa, Director, Office of Working Environment Improvement, Department of Safety and Health, Labour Standards Bureau, as a representative of the Ministry of Health, Labour and Welfare.

The five presentations were as follows:

- "Management of Chemical Substances in Sumitomo Chemical Co., Ltd." by Mr. Yasumi Shiozaki, Executive Officer, Responsible Care Office. He introduced Responsible Care, which is authorized by the International Council of Chemical Associations (ICCA) as well as the Japan Responsible Care Council (JRCC), as "Responsible Care is a Voluntary Initiative with company's commitment to improve all aspects of Environment, Health and Safety and to communicate with the public about activities and achievement to ensure transparency on five considerations, namely, communication with public, process safety and disaster prevention, environmental preservation, occupational safety and health, product stewardship. He presented his company's managing system of chemical substances, risk assessment of chemical substances and process safety (including prevention of fire, explosion, decomposition and control of chemical reaction).
- "Working Environment Measurement and occupational Health Management system in Nippon Steel Corporation" by Mr. Shinichi Abuku, General Manager, Health Promotion Department, Personal & Labor Relations Division, Safety Enhancement Division. He presented his company's principles with regard to management of chemical substances used in their process, including hazard assessment and risk control, obtaining hazard information through MSDS and other sources before chemical substances are introduced into factory sites, identifying possible unwanted chemical reactions among used substances, among other steps.
- "Management of Chemical Substances in ExxonMobil Yugen Kaisha" by MPH, CIH, Haruo Hashimoto, Industrial Hygiene Adviser, Asia Pacific Shared Services, Medical & Occupational Health. He presented his company's principles with regard to management of chemical substances, including the organization of the relevant department with regard to managing occupational health including health care as the top management policy and risk assessment of chemical substances used.
- "Management of Chemical Substances with regard to Occupational Health, from the view point of an

occupational physician ” by M.D., Ph.D., Seitaro Dohi, Head of Chief Health Management Dept., Human Resources & Employee Relations Division, Mitsui Chemicals Incorporation. He presented his company’s principles and his opinions concerning management of chemical substances, including their top and basic policies on environment, occupational safety and health, quality and the promotion of autonomous control (with emphasis on compliance of laws and regulations), risk communication, risk assessment and management from the designing stage of plant and equipment, training of competent specialists, such as occupational hygienists, with regard to the field of hazard assessment, exposure assessment and risk management of toxic substances, among other aspects.

- “Approach as the working environment measurement agency or the Occupational Hygienist in the field of working environment measurement” by Mr. Kojiro Tabuki, licensed occupational hygiene consultant, Director, Centre of Kitakyushu Environment Measurement, Nishinohon Occupational Health Service Centre Foundation. His presentation included the present state of laws and regulations with regard to occupational health, especially management of toxic chemical substances, as well as problems with regard to supporting services in the field of occupational hygiene.

These presentations were followed by a questions and answers session and a discussion on these topics, conducted by Professor emeritus Haruhiko Sakurai. At the end of Panel Discussion, Ms. Noriko Kamezawa, Director, Office of Working Environment Improvement, commented the importance of this symposium and her intention to promote improvement of working environment through Working Environment Measurement and Evaluation of its result. Finally, Professor emeritus Haruhiko Sakurai emphasized the importance of quantitative evaluation of Hazard Identification, Dose-Response Assessment, Exposure Assessment and Risk Characterization of Chemical Substances and dust as well as training competent specialists in these fields.

The symposium was attended by 150 participants, as well as guests including representatives from the Headquarters of the Ministry of Health, Labour and Welfare. Among the participants, 35 % were Occupational Hygienists in the field of Working Environment Measurement, 21% persons in charge of occupational safety and health, 12% licensed health supervisors, 8% licensed occupational hygiene consultants, 5% entrepreneurs, 3% governmental officials in charge of occupational health and 2% occupational physicians.

NEWS from WHO Collaborating Centres

Global Network of WHO Collaborating Centres for Occupational Health

Sent by Joan Burton, Canada, Temporary Advisor to WHO
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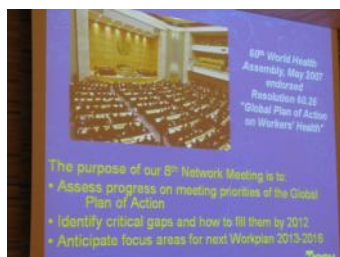
The Eighth Meeting of the Global Network of the World Health Organization (WHO) Collaborating Centres (CCs) for Occupational Health was held in WHO Headquarters, Geneva, from 19-23 October 2009, with 170 participants from 42 countries, 107 of which were from WHO Collaborating Centres. There was also participation of NGOs in official relations with WHO, namely IOHA, ICOH and IEA.

The overall purpose of the meeting was to advance the implementation of the WHO Global Plan of Action on Workers' Health (GPA) (World Health Assembly Resolution 60/26 endorsed in May 2007).



The detailed objectives were:

1. Discuss progress and needs of the 2009-2012 Global Workplan
2. Discuss roles of all parties in achieving the Workplan objectives by 2012
3. Discuss collaboration with CC Network partners; priorities, grouped CC projects, and other aspects of implementing the projects in the 2009-2012 Workplan
4. Clearly define the deliverables/products to be produced by 2012
5. Obtain CC commitments for projects to fill gaps, where still required



Dr Carlos Dora

The meeting was opened by Dr. Carlos Dora, Acting Coordinator, WHO Interventions for Healthy Environments, who warmly welcomed participants. Dr. Igor Fedotov brought greetings from ILO on behalf of Sameera Al-Tuwaijri, Director Safework, noting the complementary roles that ILO and WHO fulfill,

as the only United Nations agencies with the mandate to protect and promote worker health. This was followed by a welcome from Dr. Max Lum (on behalf of NIOSH Director John Howard, Global CC Network Chair). He reviewed the purpose of the meeting and urged attendees to participate fully in the planned working groups. A welcome from WHO by Dr. Maria Neira, Director, WHO Department of Public Health and Environment followed. She recognized the energy and enthusiasm in the room and reminded participants that WHO's power is linked to the ability to call on and convince the best scientists in the world to promote and protect workers' health.

Over a period of a week, participants in small working groups discussed 14 priority topics and many associated projects under each priority, all of them linked to the 5 Objectives in the GPA. At the end of the meeting, participants agreed on a Work Plan of priority initiatives, projects and deliverables to advance the implementation of the GPA in the period 2009-2012.

Highlights of the meeting included the first Joint Meeting of WHO Collaborating Centres and ILO CIS Information Centres, in which the similarities and differences of the two groups were discussed, and additional ways of working in synergistic relationships were explored.



Dr Maria Neira and Dr Marilyn Fingerhut

This was followed by a high-level Round Table that addressed the need to protect the health of workers during a climate of change – both economic and environmental, as well as opportunities for instruments, such as the primary health care approach, labour policies, employer groups, trade unions and the development of a green economy, to contribute to this goal. The need for a social protection floor and the risks associated with climate change were also discussed.

Dr. Marilyn Fingerhut, Co-Coordinator of the WHO Global Network of CC stated, "The Global Network Meeting takes place every three years. This was the first meeting to be held at WHO in Geneva and was the largest ever held. The participants were pleased to be hosted by WHO. The dedication, energy and spirit of commitment of the Collaborating Centres and all participants enabled a very successful Network meeting, which included 14 Working Groups, for each of the 14 Priorities of the Global Plan of Action. Their enthusiasm could be felt in all Working Groups, during which the deliverables and critical gaps to be filled by 2012 were identified, in order to assist countries to meet their commitments under the May 2007 World Health Assembly Resolution, the Global Plan of Action for Workers' Health. Now, our challenge is to successfully move forward to fill those critical gaps."

The full meeting report can be accessed on the WHO website at: http://www.who.int/occupational_health/en/

Post Conference Workshops

The meeting was followed by three 1.5-day workshops:

1. Capacity Building for Education and Training in Occupational Health
2. Healthy Workplaces: a Framework and Model
3. Healthcare Workers

IOHA participation in the WHO CC meeting

At the Eighth Meeting of the Global Network of WHO Collaborating Centres for Occupational Health, Geneva, 19-23 October 2009, IOHA was represented by Dr. Danilo Cottica, IOHA President, and Prof. Michel Guillemin, Board Member (Switzerland).



Dr Maria Neira and Dr Danilo Cottica

In the opening of the meeting Danilo Cottica spoke about IOHA's role in promoting the field of occupational hygiene globally. He noted that IOHA has been recognized as an official Non-Governmental Association by both WHO and ILO, and represents 25,000 occupational hygienists in 24 countries.

IOHA president invited participants to attend the 8th IOHA International Scientific Conference, to be held in Rome in September 2010.

Two main points should be emphasized, namely:

the interest of IOHA to support the activities of the WHO Collaborating Centres, particularly in the field of the Occupational Health Services, and, Education and Training Materials, with a view to giving a better visibility to our profession. This is under Objective 3 (GPA 3.1 OH Services and 3.2 Training for International Capacity Building)



*Dr Danilo Cottica,
IOHA President*

IOHA's active collaboration in the elaboration of toolkits and other resources to improve assessment and management of health risks at the workplace (Objective 2, GPA 2.1). David Zalk, who is an expert in control banding, is the IOHA representative in this activity.

Moreover, a special session of the meeting was organized with the ILO with the objective of strengthening the WHO -ILO collaboration in the field of Occupational Health. The IOHA President and representative Michel Guillemin took this opportunity to contact ILO representatives in order to reconstruct a solid link with this Organization with a view to improving the visibility of Occupational Hygiene.

Workshop on capacity building through education and training in occupational health

*Sent by Leslie Nickels
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A workshop on education and training for capacity building in occupational health and safety was held on 22-23 October 2009 in conjunction with the WHO Network of Collaborating Centers in Occupational Health triennial meeting. The workshop provided an opportunity for over 25 participants to hear about country and regional efforts in education and training, discuss basic occupational health competencies, and ways of promoting occupational health and safety disciplines.

There were many discussions on the creation of a learning repository that would collate and organize relevant information, on a "user-friendly" site, to support a number of training activities in occupational health and

safety. There will be a future article on this important topic.

Training and education programs in South Africa, Benin, Baltic Countries, India, Thailand, Southern Africa and Afghanistan were presented. Examples of successes, barriers, and strategies for sustainability included:

Successful approaches:

- ◆ Importance of practical exercises in training
- ◆ Group exercises most valued as training method
- ◆ Creation of local networks with similar skills
- ◆ Mentorship and access to experts for consultation and assistance

Barriers presented:

- ◆ Lack of infrastructure
- ◆ Difficulties in communication at many levels, including language constraints and conflict between organizations
- ◆ Lack of adequately trained personnel in occupational health and safety, therefore excessive workload to meet the needs
- ◆ Lack of resources (human and financial)
- ◆ Outdated regulations or absence of regulations

Strategies for sustainability:

- ◆ To identify suitable participants, who can master the material and are in a position to apply what is learned
- ◆ Establishment of communication networks to support the small number of trained personnel
- ◆ Work within the health care sector
- ◆ Development of follow-up actions
- ◆ Establishment of clear project outcomes
- ◆ Increased awareness at institutional levels
- ◆ Regulatory changes

The workshop also explored defining core competencies in basic occupational health and safety. Each of the core disciplines (occupational medicine, occupational health nursing, occupational hygiene, and safety) has a

professional scope of practice and defined educational background, yet they all share the common goal of occupational health and safety. A literature review and draft of competencies for each of the core disciplines was developed. The Workshop participants were asked to review the process and recommend a strategy for developing competencies in basic occupational health and safety. Challenges of defining competencies with relevancy to low resource settings included a lack of a common terminology or agreed upon definitions that are shared among the different professions and an overlap in specialty or sphere. These challenges seem particularly responsible for the difficulties that exist when trying to formulate a shared set of competencies based on professions within OH&S. It appears that the discipline model for defining competencies will not result in a satisfactory set of competencies in basic occupational health and safety. The workshop participants discussed and agreed to the value of a basic set of competencies in occupational health at various levels. Workshop participants agreed to form a committee to review draft competencies and good practice guidance.

Finally, workshop participants recommended developing a publication for WHO on education and career opportunities in occupational health and safety and a detailed paper for each occupational health and safety discipline.

WHO Healthy Workplace Framework: Background and Supporting Literature and Practices

Sent by Joan Burton, Canada, Temporary Advisor to WHO
E-mail: jburtonww@gmail.com

At a Healthy Workplaces Workshop in Geneva, following the Eighth Network Meeting of the WHO Collaborating Centres in Occupational Health, a framework and model for Healthy Workplaces was presented and discussed by an international audience, who subsequently approved it. A background document with supporting literature has been drafted, and is being revised and finalized at present. The current draft (dated 10 October 2009) is currently available for download from the WHO website at: http://www.who.int/entity/occupational_health/healthy_workplace_framework.pdf.

The background document for the healthy workplace framework is written primarily for scientists, medical practitioners, and occupational health and safety practitioners, to provide the scientific basis for a healthy workplace framework. It is intended to examine the literature related to healthy workplaces in some depth, and in the end, to suggest a flexible, evidence-based framework for healthy workplaces that can be applied by employers and workers in collaboration, regardless of the

sector or size of the enterprise, the degree of development of the country, or the regulatory or cultural background in the country. The model includes both the *content* of the issues that should be addressed in a healthy workplace, grouped into four large “avenues of influence”; and also the *process* – one of continual improvement – that will ensure success and sustainability of healthy workplace initiatives.

WHO intends that this document will be followed by practical Guidance documents that will summarize the framework and provide practical assistance to employers and workers for implementing the healthy workplace framework in an enterprise.

The background document is organized into nine chapters, as follows:

Chapter 1 examines the question, “Why develop a framework for healthy workplaces? Indeed, why be concerned about healthy workplaces at all?” Some

answers are provided from ethical, business, and legal standpoints. A very brief outline of recent WHO global directives is provided.

Chapter 2 expands on the global picture and describes key declarations and documents agreed to by the world community through the WHO and ILO over the past 60 years, looking at both occupational health and safety, and health promotion efforts and initiatives.

Chapter 3 looks at the question, “What is a healthy workplace?” Some general definitions are provided from the literature, as well as the definition the WHO healthy workplace working group is suggesting in this document. Then perspectives and the work being done in this area in each of the six WHO Regions are summarized.

The WHO proposed definition of a healthy workplace is:

A healthy workplace is one in which workers and managers collaborate to use a continual improvement process to protect and promote the health, safety and well-being of workers and the sustainability of the workplace by considering the following, based on identified needs:

- *health and safety concerns in the physical work environment;*
- *health, safety and well-being concerns in the psychosocial work environment including organization of work and workplace culture;*
- *personal health support/resources in the workplace; and*
- *ways of participating in the community to improve the health of workers, their families and other members of the community.*

Chapter 4 examines the complex interrelationships between and among work, the physical and mental health of workers, the community, and the health of the enterprise and society. This is a key chapter that supports with hard scientific evidence both the ethical case for a healthy workplace and the business case. It begins to flesh out the details of which factors under the control of employers and workers affect the health, safety and well-being of workers and the success of an enterprise. These factors will later provide the basis for the suggested framework.

Chapter 5 discusses the issue of evaluation. While there are many things employers and workers can do, how do they know which ones will be the most effective and cost-effective? This chapter looks at some of the issues related to the quality of published studies and evidence.

Chapter 6 then examines the scientific evidence for

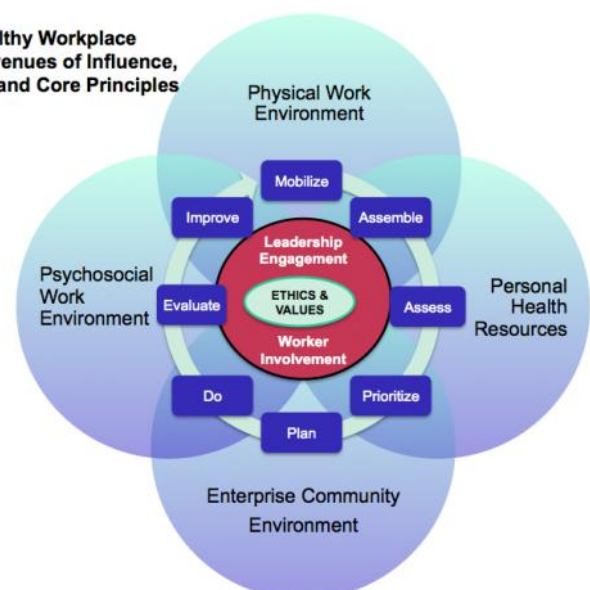
interventions that work and those that do not. Given the discussion about evaluation literature in the previous chapter, this section provides primarily evidence from systematic reviews of the literature.

Chapter 7 discusses the “how to” of creating a healthy workplace, and introduces the concept of continual improvement or OSH management systems. It also includes a discussion of some of the key features of the many continual improvement models; and examines the importance of integration.

Chapter 8 takes a step back from the framework and looks at healthy workplace issues in the “big picture” – the global legal and policy context. Clearly, while this document is focusing on things employers and workers can do, the success of their efforts cannot help but be influenced, for better or for worse, by the external regulatory and cultural context of the country and society in which they operate. This chapter discusses legislation and some of the standards setting bodies and their work as they relate to workplace health, safety and well-being.

Chapter 9 is the chapter that presents the model and framework for a healthy workplace that WHO is suggesting via this document. It is intended as a natural outcome and conclusion to the synthesis of information and evidence presented in earlier chapters. Both the *content* of a healthy workplace program in the form of four avenues of influence, and the suggested continual improvement *process* are discussed. The four avenues are represented by the four bullets in the proposed WHO definition of a healthy workplace, above. The eight steps in the continual improvement process are summarized as Mobilize, Assemble, Assess, Prioritize, Plan, Do, Evaluate, Improve. Both the content and the process, as well as core principles, are represented graphically in the model below.

WHO Healthy Workplace Model: Avenues of Influence, Process, and Core Principles



From NIOSH, USA

NIOSH Review: Qualitative Risk Characterization and Management of Occupational Hazards: Control Banding (CB)

Link forwarded by Marilyn Fingerhut, NIOSH E-mail: maf2@cdc.gov

The majority of chemical substances in commerce have no established occupational exposure limits (OELs). In the absence of established OELs, employers and workers often lack the necessary guidance on the extent to which occupational exposures should be controlled. A strategy to control occupational exposures that may have value when there are no relevant OELs is known as control banding (CB).

CB is a qualitative strategy for assessing and managing hazards associated with chemical exposures in the workplace. The question about the utility of the CB

strategy for workplaces in the United States has been raised, warranting a critical review of its concepts and applications.

The report, presented in NIOSH Publication No. 2009-152, is the result of a review of the published literature and related proceedings on CB, and it is available online at: <http://www.cdc.gov/niosh/docs/2009-152/>

For more information or questions about the document, contact T.J. Lentz (TLentz@cdc.gov) or Catherine Beaucham (CBeaucham@cdc.gov).

From NIOH, SOUTH AFRICA

The NIOH hosts "International Course - WHO Modules in Occupational Health"

Sent by: Claudina Nogueira, NIOH, South Africa

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The National Institute for Occupational Health (NIOH), a WHO Collaborating Centre (CC) in Occupational Health (OH), hosted the international course *WHO Modules in Occupational Health: risk assessment and management of chemical and other exposures in agricultural, industrial and health sectors*, from 28 September to 2 October 2009. The course was designed to contribute to the knowledge of the novice professional, as well as the experienced OH practitioner. The information found in the modules is applicable to all with an interest in keeping the workforce healthy and safe: occupational hygienists, occupational health nurses, occupational medicine physicians, public health officers, policy makers, labour inspectors, and worker health and safety advocates.

The *WHO Modules in OH* were developed by a team of experts from the Division of Environmental and Occupational Health Sciences, School of Public Health, University of Illinois - Chicago, USA, also a WHO CC in OH. The modules were developed to execute the 49th World Health Assembly Global Strategy for OH; the materials complement the effort of the International Programme on Chemical Safety (IPCS) – Global Implementation Strategy on Occupational Risk Management.

The materials are case-based modules in the specific sectors of agriculture, manufacturing, and the health service; the course combines lectures, demonstrations, problem solving and building of skills through interactive, small group and individual activities, and is designed around the following principles:

- Workers are entitled to a healthy and safe work environment,
- Risk evaluation requires a systematic approach that is essential for control and prevention of work related injuries and illnesses,
- Sentinel health events have been traditionally used as an indicator of exposure to an occupational hazard. However, currently there is enough knowledge of workplace hazards to intervene prior to an adverse health outcome.

The course was organised and coordinated by Ms Inakshi Naik, Head of Section: Analytical Services, and her team at the NIOH, in close collaboration with the course presenters. Generous sponsorship and support from the National Institute for Occupational Safety and Health (NIOSH), USA; and Lancet and Ampath Laboratories in South Africa, allowed the course registration fees to be kept as low as possible. Interactive activities included site visits to two different workplaces: a hospital laundry and two specialised laboratories of the NIOH.

The following experts from the University of Illinois, Chicago, were the main course presenters:

Prof Leslie Nickels – Executive Director and Clinical Assistant Professor; specialist in training effectiveness, programme evaluation, and health and safety interventions for underserved populations;

Prof Lorraine Conroy – Executive Director and Professor; specialist in workplace exposure assessment,

characterization of workplace contaminant sources, and ventilation system model development and validation;

Prof Preethi Pratap – Research Assistant Professor, with interests in health and safety training in occupational and public health, exposure to workers from hazardous waste sites, and environmental epidemiology.

Ms Jennifer McGowan from the University of Illinois was the course evaluator as well as a facilitator, and Dr Lalitha Burra from Nayati International, India, assisted with the facilitation as she coordinated this same course in India in 2008.



Course presenters and facilitators



Course sponsors

The aims of the course were to develop and strengthen the following approaches in OH:

- Anticipate and recognize workplace hazards
- Describe exposure to workplace hazards and their health effects
- Generate recommendations for preventing exposure using available resources and technologies
- Develop a programme plan for addressing workplace hazards

The week-long course was attended by close to 90 participants from both public and private sectors. The majority of participants were South African, the largest group being from the Department of Public Service Administration (DPSA), followed by the Department of Health – both National and Gauteng Provincial. Two participants were from the National Department of Labour, and four participants were from African countries – Angola, Mali, Tanzania and Zimbabwe. A number of staff members from the NIOH and the NHLS also attended.

All participants who attended the full course were issued with attendance certificates on the last day. Furthermore, a certificate of competency (from the University of Illinois - Chicago and the NIOH, Johannesburg) will be issued to all participants scoring higher than 70% on post-course performance- and knowledge-based evaluations.

A CD of the full course was created as an Integrated E-Learning Platform – essentially a video recording of the presentations, to be used as a training tool by trainers for future capacity building. The E-Learning Platform initiative was spearheaded by Dr Barry Kistnasamy, Executive Director of the NIOH.

On completion of the course, the participants were equipped to:

- Complete an occupational history
- Recognize a work related injury or illness
- Conduct a qualitative assessment of a workplace
- Conduct an incident investigation
- Categorize exposure groups
- Complete an exposure and health effect rating chart
- Develop a strategy for collecting quantitative data
- Recommend intervention strategies for reducing exposure
- Begin a programme plan for various workplaces

The course *WHO Modules in OH* is directly in line with the NIOH core function of conducting outreach and training activities to build capacity in occupational health and safety in southern Africa. Furthermore, the course had an inbuilt “train-the-trainer” component which will reinforce the capacity building benefit in the region. A number of trainers were identified from the participants; the

trainers will continue working in close collaboration with the NIOH to implement this programme. The main objective will be to contribute to the development of scarce skills and resources in occupational and environmental health in the respective sectors.

This course is also directly in line with the overarching aims of the current WHO Global Network Plan for

Occupational Health (2009-2012), which is driven by the Global Plan of Action (GPA) for Workers' Health 2008-2017. The course is a project titled "Fundamentals of Occupational Health and Safety" within GPA Objective 2: Healthy Workplace Programmes, and more specifically within Priority 2.1: Develop practical toolkits for the assessment and management of occupational health risks (chemical, physical, biological, psychosocial).

News from the ILO

"Shaping Destiny" - ASSE Signs MOU with ILO

The American Society of Safety Engineers signed a Memorandum of Understanding with the International Labour Organization at the Safety 2009 Professional Development Conference and Exposition in San Antonio, Texas, on 30 June 2009, agreeing to work together to prevent workplace injuries and illnesses.

A Geneva, Switzerland based agency of the United Nations, the ILO works to bring together governments, employers and workers of its member states to promote decent work throughout the world.

The MOU states that ASSE and the ILO will work together towards the common objective of preventing illness and injuries in the workplace across all industry sectors through advocacy, promoting awareness, knowledge development, information dissemination and the application of relevant standards and industry best practices in the community and workplace.

"As there are no global marketplace boundaries today, and with a large number of our 32,000 occupational safety, health and environmental professional members continuing to work in countries and on projects around the world, this agreement will help us move forward in preventing injuries and illnesses worldwide," said ASSE President Warren K. Brown, CSP, ARM, CSHM. "This agreement also reflects the value of the SH&E profession and ASSE's growth."

The MOU is an example of ASSE's goal of expanding its outreach to other safety, health and environmental organizations, said Dennis Hudson, ASSE's director of Professional Affairs.

"Sound occupational safety and health programs that implement best strategies are the grease for the

machinery of powerful economic engines," said Ilise L. Feitshans, JD, ScM, who is coordinating the 5th edition of the ILO Encyclopedia of Occupational Safety and Health. "Without the information we provide through these workplace safety and health programs, no employer can survive because accidents and disease are not simply expensive, but wasteful."

Feitshans said the agreement will help workers and employers by providing a network of experts that fosters knowledge sharing. "This sharing will include information on international standards, national legislation, technical guidance, methodologies, accident and disease statistics, best practices, educational and training tools, research and hazard and risk assessment data."

A 90-year-old organization formed at the Treaty of Versailles, the ILO does the same work as ASSE, said Feitshans, "exporting safety and health information that could save many lives."

"Occupational health and safety management systems with time-tested prevention strategies and conscientious implementation do much more for the economy than merely reduce the costs of accidents and the overall burden of disease to society. Applying the best practices and well understood methods of reducing risks through a clear occupational health management program prevents needless waste, saves money, and, therefore, is a lifeline that keeps marginal employers afloat in turbulent economic times."

The ILO Encyclopaedia of Occupational Health and Safety is available in hard copy in 12 languages, and the goal of the 5th edition is to "create a living document that is true to the heritage of the first edition of the encyclopaedia

Sent by: Ilise L Feitshans E-mail: feitshans@ilo.org
and

Chris Sanford E-mail: chris@fsmmag.com

that was put together by truly great people like Dr. Alice Hamilton, the mother of industrial medicine who invented the Right to Know,” said Feitshans. “The challenge is to do it in a time of information overload; to

serve as a filter to help people who have data to determine if that data is good, shaping destiny in a paradigm appropriate the 21st Century.”



Signing Ceremony San Antonio: Chris Patton, President ASSE, Dennis Hudson, Government Affairs, Warren Brown, Immediate Past President ASSE and Ilise L Feitshans of ILO SAFEWORK (Photos provided by courtesy of ASSE)

News from the European Agency for Safety and Health at Work (EU-OSHA)

Sent by: Jukka TAKALA, Director EU-OSHA

E-mail: takala@osha.europa.eu

and

Birgit MÜLLER E-mail: muller@osha.europa.eu

There are many interesting and important news, in many languages, on the EU-OSHA Website: <http://osha.europa.eu/>. Some examples are hereby presented.

Interview with the director of EU-OSHA, Dr Jukka Takala - 28 questions to the Director



Dr Jukka Takala

A lively and very innovative interview with the director of EU-OSHA, Dr Jukka Takala, is available online at: http://osha.europa.eu/en/press/photos/jukka_takala/Agency_videos

Dr Takala is presented at his office in Bilbao, giving his views on the most important topics related to occupational health and safety in Europe and EU-OSHA contribution to the improvement of European workers' working conditions. Through 28 questions, Dr Takala speaks about OSH policies and strategies in the EU, the Agency's European Information Campaigns, the evolution of occupational health and safety in the last years, statistics and figures, and the current economic crisis and its repercussion on health and safety at workplaces.

Work-related stress - one of the biggest OSH challenges in Europe

Stress is the second most frequently reported work-

related health problem, affecting 22% of workers from the EU 27. Studies suggest that stress is a factor in between 50% and 60% of all lost working days. This represents a huge cost in terms of both human distress and impaired economic performance.

A __new report on work-related stress based on international and national statistics is available at: http://osha.europa.eu/en/publications/reports/TE-81-08-478-EN-C_OSH_in_figures_stress_at_work/view

Among many others, a video on this subject – concerning the implementation of the European social partners' autonomous framework agreement on work-related stress – is available online (in 22 languages) at: <http://osha.europa.eu/en/press/photos/topics/>.

Practical Solutions

The European Agency for Safety and Health at Work monitors, collects and analyses scientific findings, statistical information and prevention measures. It also supports the exchange and sharing of information. If you are involved in workplace health and safety, you can use this section to find practical information, guidelines and case studies to help solve a variety of problems. Good practice that has been implemented successfully in one workplace can be adapted and used elsewhere. However, before good

practice information is applied, an assessment of the hazards and risks present in the workplace should be carried out, making reference to relevant national legislation.

While EU-OSHA is not responsible for the content of external internet sites to which it links, we aim to ensure that we only link to good practice information that is reliable and meets identified criteria for prevention. These include following: the “prevention hierarchy” set out in EU legislation, which includes starting with prevention at source and prioritizing collective measures over individual ones, and, ensuring the participation of workers.

More detailed information may be found at:

http://osha.europa.eu/en/practical-solutions/09-10-13_Good_Practice.pdf

and

<http://osha.europa.eu/en/practical-solutions>

OSH in the school curriculum: requirements and activities in the EU Member States

To underpin occupational safety and health (OSH) education in schools and colleges, it is necessary to formalize it in curriculum requirements. This report reviews how the Member States are including OSH and risk education in their national curricula. The report shows that there is considerable progress and activity in this respect at both primary and secondary education levels in terms of both implemented and planned actions in the Member States. The report also identifies some success factors for mainstreaming OSH into education curricula.

The full report is available online at:

<http://osha.europa.eu/en/publications/reports/TE3008521ENC>

Fact Sheet: Assessment, elimination and substantial reduction of occupational risks.

Summary of an Agency report

Risk assessment is the basis for successful health and safety management, and the key to reducing work-related accidents and occupational diseases. If implemented well, it can improve not only workplace safety and health, but business performance in general. The report supports the European ‘healthy workplaces’ campaign 2008/09 on risk assessment by providing information on successful interventions in the workplace to eliminate or substantially reduce risks. The report is aimed at those who are responsible for carrying out risk assessments in the workplace and for making decisions on preventive measures.

Further details at: http://osha.europa.eu/en/publications/factsheets/en_85.pdf

Healthy Workplaces Campaign on risk assessment comes to an end

The closing event, held in Bilbao on 17 November, showed important results achieved in the 2 years-campaign. Two major projects of the European Agency were also presented: preliminary results of the European Survey of Enterprises on New and Emerging Risks (ESENER), and the free Online Risk Assessment (ORA) tool, which will make it much easier for SMEs to carry out risk assessments. EU-OSHA Director Jukka Takala, joined by Sven Otto Littorin, Swedish Minister of Employment and Celestino Corbacho, Spanish Minister of Employment and Immigration, highlighted the strategic importance of risk assessment in these times of economic crisis.

Further details at:

<http://osha.europa.eu/en/campaigns/hw2008/europeansummit>

and

<http://osha.europa.eu/en/press/press-releases/healthy-workplaces-campaign-on-risk-assessment-comes-to-an-end>



Estimations on the Occupational Burden of Disease and Injury

Sent by: Jukka TAKALA, Director EU-OSHA

E-mail: takala@osha.europa.eu

In view of the importance of this subject and the great need for further work in this field, it is important to share with readers the following information.

Paper on "Global trend according to estimated number of occupational accidents and fatal work-related diseases at region and country level", by Päivi Hämäläinen, Kaija Leena Saarela and Jukka Takala (Published in the Journal of Safety Research Volume 40, Issue 2, 2009, Pages 125-139, National Safety Council and Elsevier Ltd)

This important paper is available online, by courtesy of Elsevier, at: <http://osha.europa.eu/en/press/articles>. The abstract is hereby presented.

Background

Although occupational accidents and work-related diseases have been of interest for a long time, due to lack of proper recording and notification systems the official numbers of occupational accidents and work-related diseases are missing for many countries. Presently, the demand for effectiveness and an interest in the economic aspects of accidents have increased prevention activities at company and country levels.

Methods

Occupational accident data of selected countries and of World Health Organization regional divisions together with the global burden of disease were used in estimating global occupational accidents and fatal work-related diseases. The trend of global occupational accidents and work-related diseases is presented at region and country levels. The years 1998, 2001, and 2003 are compared in

the case of occupational accidents and the years 2000 and 2002 in the case of work-related diseases.

Results

The total number of occupational accidents and fatal work-related diseases has increased, but the fatality rates per 100,000 workers have decreased. There were almost 360,000 fatal occupational accidents in 2003 and almost 2 million fatal work-related diseases in 2002. Every day more than 960,000 workers get hurt because of accidents. Each day 5,330 people die because of work-related diseases.

Conclusions

Information on occupational accidents and work-related diseases is needed so that countries may understand better the importance of occupational health and safety at country and company level. Especially companies in developing countries are not familiar with occupational safety and health. Statistical data is essential for accident prevention; it is a starting point for the safety work.

Those who would want to have more detailed information on this study, may contact either Ms. Päivi Hämäläinen at the TUT (paivi.hamalainen@tut.fi) or Dr Jukka Takala (takala@osha.europa.eu).

European burden of disease and injury at work on the EU-OSHA blog

Among many other topics, discussions specifically on this subject have been started in the new EU-OSHA blog:

<http://osha.europa.eu/en/blog>

The direct link is:

[http://osha.europa.eu/en/blog/latest-news-on-the-global-and-european-burden-of-disease-and-injury-at-](http://osha.europa.eu/en/blog/latest-news-on-the-global-and-european-burden-of-disease-and-injury-at-work)

Contributions from Readers

INTERNATIONAL

International Training Modules for Occupational Hygiene - status report November 2009

Sent by: Roger Alesbury E-mail: roger.alesbury@uk.bp.com

Steve Bailey E-mail: steve.r.bailey@qsk.com

Brian Davies E-mail: bdavies@uow.edu.au

During the last few months there have been a number of significant and exciting developments. The name being used to describe the organisation handling the development of the international training modules is 'the Occupational Hygiene Training Association' (OHTA). A company limited by guarantee has been registered under

the name OHTA and rules of operation are being developed. This body will work under the guidance of IOHA and its member organisations and its board members will be drawn from IOHA and IOHA member organisations.

The success behind this project has been the cooperation

between occupational hygiene bodies across the world. To support these aims there have been many workshops and discussions and agreements have been set out through a series of Memorandums of Understanding - a simple way to set out and demonstrate shared goals and ambitions to work together.

The original Memorandum of Understanding between IOHA members societies now has 10 signatures BOHS (UK), AIOH (Australia), AIHA (USA), OHSI (Ireland), SAIOH (South Africa), HKIOEH (Hong Kong), SOFHYT (France), MIHA (Malaysia), NYF (Norway) and ABHO (Brazil).

At the IOHA board meeting in October, the IOHA Board agreed to sign a Memorandum of Understanding with OHTA. As part of this IOHA consents to the use of the IOHA logo with the statement "Supported by IOHA" on certificates, website and training documentation. IOHA will also nominate a representative to the governing board

Together with AIOH and BOHS, the IOHA board has also agreed to provide funding toward the development of a website where the training materials can be hosted and accessed. Work is now progressing on the development of this learning portal to hold the materials and to

provide links to participating IOHA member organisations and examining boards. The site will also have links to 'Approved' course providers. These are organisations who meet the basic criteria to run the courses and have been approved to offer the student assessment process. These links will enable site users to identify where and when courses are being offered. All course materials will be available free of charge and we hope to have the facility available by the year end. When the site is complete in March 2009, it will facilitate feedback and updating of hosted materials on a 'Wiki' style site.

One of the principles of this work is to improve the level of training in occupational hygiene and to provide a recognised scheme for qualifications at the intermediate/ technician level - to complement the higher level professional qualifications recognised under the IOHA NAR scheme. NAR examination bodies are being consulted and, at the PCIH in Vancouver (October 2009), ABIH, the BOHS Faculty of Occupational Hygiene and the Canadian Registration Board of Occupational Hygienists signed an MoU to work together in the development of a common platform for credentialing individuals at this intermediate level.

FROM COUNTRIES, BRAZIL

The IX Ibero-American Congress on Occupational Health

Sent by L.C. Morrone, Professor - Medical Sciences of Santa Casa of São Paulo, Brazil

E- mail: morronelc@uol.com.br

The IX Ibero-American Congress of Occupational Medicine was held in Salvador, Bahia, Brazil, 3-7 October 2009, with 662 participants, mostly occupational physicians, who represented 26 Brazilian states, as follows: 306 (more than 80%) from Bahia, 99 from São Paulo, 31 from Rio de Janeiro, 31 from Minas Gerais, 26 from Paraná, 21 from Goiás and 21 from Espírito Santo. Young professionals accounted for 5.2% of the participants. There were also representatives from other countries, namely, Mexico, Chile, Portugal and Argentina.

A few abstracts are copied below, as examples of papers presented in this event. The full papers and other presentations, as well as further information on this event may be obtained by sending an e-mail to the author.

Occupational Diseases seen by the Specialized Outpatient Service of Occupational Medicine of Santa Casa de São Paulo - by Juliana Midori Hayashide, Resident Physician in Occupational Medicine at the Faculty of Medical Sciences of Santa Casa of São Paulo

Introduction: The outpatient department of occupational diseases of Santa Casa - São Paulo, SP (Brazil) attends to workers referred by doctors from different specialties in the Institution and by external services. The primary focus is to

establish a causal nexus between the cases of disease and working conditions, in order to prevent disease and promote the health of workers. Whenever necessary, workplaces are visited in order to complement the information obtained from the examined worker. This service is provided once a week by the occupational medicine residents and three mentors. A progressive increase in the number of patients has been observed since 2008, mainly due to improved diagnostic capabilities of the service. **Objectives:** 1) To describe the profile of the examined patients, the diagnosed diseases and the origin of the referrals. 2) To present summaries of five cases considered to be illustrative. **Materials and Methods:** Review of medical records and reports. **Results:** A total of 294 patients were examined, most of them being male industrial workers. The most frequently reported occupational diseases were synovial disorders, dermatoses and problems related to tendons and impairment of intervertebral disks. In order to illustrate some of the aspects observed, a brief description of five following cases was provided, some of them with photographs: 1- lumbar disk hernia in worker in a blowing ejector machine; 2-irritant contact dermatitis in an offset printing operator; 3- incapacity for work in patient with sequel from cranio-encephalic trauma; 4- tinker occupational asthma; 5- aptitude for work of occupational examination for one person with special needs.

Occupational Risks in the Production of Lead Solder and Lead Anodes, by Flávia Souza e Silva de Almeida – Occupational Physician

Objective: To describe and analyze the occupational risks and their health impact, as well as the conditions of environmental hygiene in an enterprise producing solders and anodes for electroplating, and to identify possible improvements in the work environment. **Material and Methods:** This study consisted of an exploratory analysis of data obtained from both the Programme for the Prevention of Environmental Hazards and the Occupational Medicine Programme of this enterprise; the latter included anamnesis, as well as physical and complementary medical exams of workers. Occupational hazards in the workplace were also evaluated. **Results and Discussion:** The medical examination disclosed seven workers with non occupational conditions and three possible cases of work-related diseases. Among the occupational diseases, there were two cases of contact dermatitis due to contact with rubber, and one case of lead poisoning. The lead poisoning diagnosis was based on abnormal lead blood levels (Pb-B) and symptoms of headache and abdominal pain. The lead in blood (Pb-B) evaluations of all the workers disclosed that two of them were at the upper limit and other two, between accepted values and the maximum biological permitted level. In the evaluation of δ -amino-levulinic acid in urine (ALA-U) all values were within the normal range. The concentrations of environmental Pb measured varied according to the worker's activity; they were around and above the acceptable occupational exposure limit for workers in ovens and below the action level in other points (e.g., centre of the shed, extrusion machine and eating room). There was exposure to noise at the level of 95 dB (A) for the operator of the stacking machine and, 83 dB (A) for the general helpers. From the evaluation of heat stress, it was concluded that the performance of certain tasks, such as oven work, should not be permitted without appropriate control measures. The obtained illumination levels were in agreement with the accepted Brazilian standards. **Conclusion:** Although some aspects of the working conditions and physical environment in this enterprise may be considered satisfactory, changes must still be made in the work environment in order to decrease health hazards and ensure better comfort for the workers.

CANADA

News from the IRSST

IRSST launches OHS scientific watch in blog form

The "Institut de recherche Robert-Sauvé en santé et en sécurité du travail" (IRSST) is making accessible, in blog form, the scientific information documented by its Strategic Watch Department. This scientific information comes from the daily monitoring of more than 650 Web pages dealing with occupational health and safety (OHS)

Ergonomic Risk Analysis of Work in Grinding Stations in a Steel Foundry, by Patrícia Rigobelo Chaud - Resident Physician in Occupational Medicine at the Faculty of Medical Sciences of Santa Casa of São Paulo.

Introduction: The industrialization and globalization with demands of increase in productivity brought reduction of costs, which caused important problems such as: alterations of the biological rhythm and long working hours. One of the negative consequences to the health of workers was the increase of incidence of musculoskeletal diseases related to work (MSDs). Particularly in metallurgical industries there are work positions, which represent important problems concerning physical effort, body posture and demands for long periods of standing position. **Objectives:** 1. To evaluate body posture, movements and difficulties among 147 people who work with grinders in a company of steel melting. 2. To relate possible complaints with the work station 3. To suggest changes aiming at a better adaptation between the workers and their jobs. **Materials and Methods:** 1. The study of the activities carried out by workers dealing with grinders through observations of their workstations. 2. The use of ergonomic tools, such as check lists for the evaluation of MSDs risk (e.g., Suzanne Rodgers check list and the semi-quantitative criteria of Moore & Garg). 3. Analysis of 147 files searching for years of employment, gender, age, appointments reason and diagnosed diseases. Moreover, there were interviews with 30 workers who deal with grinders in order to discover their difficulties and complaints concerning the performance of their tasks. **Results and Discussion:** The upper limbs upward movements and the great effort required are responsible for various complaints and lesions. Continuous cervical flexion, maintenance of an inadequate spinal curve, inadequate body posture and movements, as well as long orthostatism are responsible for the back complaints. There were 25 workers on medical leave. Among the 147 workers examined, 45% complained of pain, especially in upper limbs and back pains, and, 22.4% had already developed an occupational disease. **Conclusion/recommendation:** In order to avoid health hazards and improve of quality of life of these workers, the occurrence of biomechanical factors leading to MSDs must be avoided or reduced, through improvements both in the equipment and work practices.

Sent by: Maura Tomi E-mail: Maura.Tomi@irsst.qc.ca

and the information collected by its personnel during discussions, workshops, forums, colloquia, conferences or any other event addressing the major issues of OHS research.

Aimed at all audiences, but particularly the scientific

community and OHS professionals and stakeholders, these blogs cover nine themes:

- Occupational health and safety in general
- Noise and vibration
- Contaminants
- Work context
- Protective equipment
- Machine safety
- Occupational rehabilitation
- OHS statistics
- Musculoskeletal disorders

In inaugurating these blogs, the IRSST's president-CEO, Marie Larue, explained that by "choosing to make the results of scientific watch accessible by means of a modern and rapid tool with a search engine, the IRSST is making relevant information available to Web surfers that can be useful to the research community as well as to the working community."

CHILE

Determinants of quality of life in Chilean workers – a study by Marisol Concha, Javier Labbé and Juan Giaconi (ACHS – Asociación Chilena de Seguridad)

Introduction:

Quality of life (QoL), represents the subjective assessment of the sense of well-being, and has been increasingly used as an indicator in community interventions and health surveys. This paper examines the relationship between QoL, demographic and working characteristics.

Methods:

A cross-sectional questionnaire survey including perception of QoL, sex, age, socioeconomic characteristics, conditions of the working environment and economic sectors was conducted in Chile. A total of 2857 workers between the ages of 20-60 participated. QoL scores of workers were compared a base individual. Working characteristics and demographic variables were analyzed using univariate and multivariable linear regression using SPSS.

Results:

Multivariable linear regression showed that to be female, old age, experience of own illness, experience of injuries at work, experience of injuries not at work, working in commerce and transportation and inadequate

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Polyurethane foam spraying - Good practices guide

A new good practices guide was developed jointly by the Institut de recherche Robert-Sauvé en santé et en sécurité du travail (IRSST) and the Association paritaire pour la santé et la sécurité du travail du secteur de la construction (ASP Construction). Its intended use is to make people aware of the hazards, risks and risk factors¹ associated with the application of thermal insulation as well as means of controlling them. The composition and uses of polyurethane foam represent three types of hazards during spraying, namely chemical and ergonomic hazards, as well as those related to safety.

To download the document, please visit:

http://www.irsst.qc.ca/fr/publicationirsst_100503.html

The document is also available in French:

http://www.irsst.qc.ca/en/publicationirsst_100494.html

Sent by: Marisol Concha E-mail: gsamcb@achs.cl

working conditions are significant predictors of reporting a lower score in quality of life ($P<0.01$). High socioeconomic status, working in agriculture and manufacturing are significant mitigating factors in the regression equation for the quality of life scores ($P<0.01$). Working in services, construction and mining were not significant factors with quality of life score ($P<0.01$). Univariate analysis and logistic regression showed similar results.

Discussion

Instruments in which assess the changes in the perceived QoL of workers are of increasingly importance as occupational healthcare providers and insurance institutions are challenged to evaluate their programs. Findings from this study may help to use new instruments from the patient's perspective to monitor and evaluate different interventions. This research should be conducted in samples representative of high and low risk workers, so that results may generalize to the broader population. One of the main findings is that, in this study, accidents at work play a mayor role on reducing QoL of the Chilean workers.

GERMANY

How safe is Control Banding?

Sent by: Martin Tischer E-mail: tischer.martin@baua.bund.de

Control banding (CB) has experienced a favourable global reception in recent years. Promotion of CB by organizations such as AIHA, ACGIH, IOHA, NIOSH, HSE, BAuA, ILO, GTZ, and WHO has resulted in CB now being used worldwide by small and medium enterprises (SMEs) in developed and developing countries. Although CB has received international acclaim, thus far only a few attempts have been made to validate and verify the approach on a scientific basis. Hence the Bundesanstalt für Arbeitsschutz und Arbeitsmedizin (BAuA) has launched a research project on the evaluation of the protection level of the German Control Banding scheme which is called "Easy to use Workplace Control Scheme" (EMKG).

The evaluation starts with measurement data from BAuA field studies (representing the branches: offset printing, screen printing, optician workshops, and furniture production) and corresponding OELs for the chemicals involved. The comparison of measured data with OELs reveal that almost no exceedance of OELs was observed in

any of the four branches, indicating a high level of protection.

In a subsequent step, a Monte Carlo Simulation was employed to explore whether the empirical results can be generalized using a probabilistic model. It was found that CB does not (at least potentially) guarantee a high protection level in either case. On the other hand, the Monte Carlo Simulation showed that compliance was high for volatile liquids used in closed systems and for solids in the presence of local exhaust ventilation. Overall it is therefore concluded that further validation is necessary which should be based on empirical data from a wide variety of workplaces. The detailed research results have been published in:

The full paper has been published as: Tischer M, Bredendiek-Kämper S, Poppek U, Packroff R. (2009) "How safe is Control Banding? Integrated Evaluation by Comparing OELs with Measurement Data and Using Monte Carlo Simulation", Ann. Occup. Hyg. 53(5):449-62

THE NETHERLANDS

Web-Based Tool for Exposure Assessment and Control Banding

**Sent by Andrea Hiddinga, Representative from The Netherlands to the IOHA Board
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The Stoffenmanager is a web-based tool for exposure assessment and control banding, available online, free of charge, in Dutch and English, at: www.stoffenmanager.nl

The validated model is accepted under the EU REACH regulation.

In October 2009 the 10.000th user was registered. Under

contract of the Dutch Ministry of Social Affairs and Employment a new version 4.5 will be developed in 2010.

Among others, new features will include: a control banding nano-module, PIMEX-visualizing nano-exposure, a GHS proof control banding module and a REACH Exposure Scenario report format. For further more information, please, contact: henri.heussen@arbounie.nl

PORTUGAL

Wood dust exposure and work-related symptoms in Portuguese furniture workers

**Sent by: Olga Mayan
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Several health hazards have been associated with exposure to wood dust in workplaces. In general, exposure to wood dust is considered to have an irritating effect on eyes, nose and throat, in addition to pulmonary function impairment (Malo *et al*, 1995; Enarson *et al*, 1998; RTECS, 2003). The International Agency for Research on Cancer (IARC) has classified wood dust as a human carcinogen based on epidemiological evidence (IARC, 1995, NTP. 2000). The European Union (EU) directive (1000/38) has also classified

wood dust as carcinogenic, and has set the occupational exposure limit (OEL) for hardwood inhalable dust to 5 mg/m³. In 2003, the Scientific Committee for Occupational Exposure Limits (SCOEL) had proposed an OEL of 1-1.5 mg/m³ (inhalable fraction) (Bolt *et al*, 2003). The Portuguese standard for occupational exposure limits (NP 1796:2007) recommends that wood dust exposure should never exceed 1 mg/m³.

In view of the possible cancer risk and other health concerns, a research project on occupational exposure to wood dust was carried out in 2001-2004, with support from the programme Quality of Life and Management of Living Resources of the European Union (Project: Risk Assessment of wood dust: assessment of exposure, health effects and biological mechanisms - WOOD-RISK; coordinator: Finnish Institute of Occupational Health - FIOH). Occupational exposure to wood dust was assessed in a separate subproject (acronym: WOODEX) with the help from national experts from the 15 member states of the EU, referred to as EU-15, that include Portugal. A country questionnaire, a company survey (in Finland, France, Germany and Spain), exposure measurements (from Denmark, Finland, France, Germany, The Netherlands and the United Kingdom) and local expert judgments were used to generate preliminary estimates of exposure to different types of wood dust and level of exposure. Estimates based on the obtained results indicated that high levels of exposure occurred in the construction and furniture sectors.

The Portuguese questionnaire results showed that the number of workers exposed to inhalable wood dust was 101 thousands and that 56% of these workers were exposed to levels of wood dust higher than 1 mg/m³ (Timo Kauppinen *et al.*, 2006).

These results showed that, in Portugal, wood dust exposure is an issue of concern that needs a better characterization. For this purpose, a cross sectional study of wood dust exposure in furniture factories (main sector of the wood processing industry) was performed in one county in Portugal.

The study was promoted by Associação Empresarial de Paços de Ferreira (AEPF) - a commercial and industrial association - with the scientific coordination of the National Institute of Health (INSA) and the Medical School of the University of Porto (FMUP) (Olga Mayan *et al.*). This study aimed at assessing the wood dust exposure and investigating the occurrence of work-related symptoms. The study, which included 17 factories, was performed in the years 2005-2007. A total of 505 woodworkers (382 males; 123 females) were interviewed through a physician-administrated questionnaire, based on the standardized respiratory questionnaire (American Thoracic, 1987). The questions referred to work-related symptoms (chronic respiratory and irritation symptoms), demographic characteristics, occupational history and smoking habits. Wood dust exposure was assessed from personal and static air sampling. Closed face filter holders (Millipore, MA, USA) housing a pre-weighed 37 mm diameter membrane filter (Millipore 0.8µm) were used. The cassettes were connected to portable, battery operated, pumps (SKC Aircheck 2000), sampling at flow rates of 1.2 l/min¹, and the NIOSH method 0500 was used for gravimetric dust measurements.

A total of 1580 personal and 35 static measurements were taken to determine personal exposure to wood dust and the

time-weighted average was calculated for each workplace. The results have shown that the overall inhalable wood dust concentration varied between 0.15 - 29.5 mg/m³ with a mean value of 2.6 mg/m³; 5.4 (geometric mean; geometric standard deviation).

Among other findings, a detailed analysis of the air monitoring data showed that: sanding operations, mainly manual sanding, and cutting were consistently associated to higher dust concentrations; the lowest exposures were found during assembling, handling and packing; dust emissions from portable type sanding machines were considerably reduced by the use of low-volume high-velocity type extraction, and, dust exposure was decreased by adequate exhaust ventilation;"

Personal exposure to wood dust was calculated using measurements and information collected by work task (e.g., cutting, sanding, and sanding+ cutting, assembling / handling / packing). Cumulative exposure to dust was calculated for each worker by multiplying the duration of the work by the intensity of exposure (years.mg.m⁻³).

It was observed that 61% of the workers had respiratory symptoms; 37.7% had nasal symptoms (epistaxis more than once a week. 9.2%); 29.5% had bronchial symptoms and 10.6% associated both ("respiratory and nasal symptoms"). Other reported symptoms included red (burning) eyes (21.9%) and skin disorders (5.6%).

Multivariate linear regression analysis showed positive correlations between cumulative exposure and nasal symptoms, including epistaxis.

The following determinants of exposure were found to 'decrease' dust concentration: manual assembling/packing; sanding with adequate exhaust ventilation; adequate exhaust ventilation; vacuum cleaning of machines and special cleaning staff.

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SWEDEN

The Importance of Exposure Assessment in Occupational and Public Health

Sent by: Linnéa Lillienberg E-mail: linnea.lillienberg@amm.qu.se

This International Workshop was held in Gothenburg, Sweden, on 24 September 2009, as a gift to Linnéa Lillienberg before her retirement.



Professor Alex Burdorf, Department of Public Health, Erasmus MC, Rotterdam, and Professor Robert Herrick, Harvard University School of Public Health, Boston, USA, were invited speakers from outside Sweden.

Alex Burdorf talked about “Determinants of exposure in epidemiological studies; exposure variability and exposure models”. He illustrated the rapid progress in exposure assessment modeling in the past few years. Robert Herrick presented a study on “The course of heart rate variability decline following particulate matter exposure in an occupational cohort”.



Invited speakers from Sweden were Ingrid Liljelind, Dept of Public Health and Clinical Medicine, Umeå, who talked about “Self assessment of exposure; reliability and feasibility in epidemiologic research, including workers’ interpretation of self assessment”

and Pernilla Gustafson, Occupational and Environmental Medicine, Gothenburg, who presented a study on “Indoor levels of PAHs in homes with or without wood burning for heating”.

Linnéa Lillienberg presented how these models can be used in her lecture on “Exposure to metalworking fluids; determinants of exposure and respiratory symptoms in machine operators”. She also gave an informal talk about influential events, colleagues of significant importance

and other experiences in her work as an active occupational hygienist. Linnéa mentioned that her involvement in the IOHA Board, from 1988 to 1996, and being IOHA President during 1995 were important highlights of her career.

The workshop ended with a round table discussion on “Future of Occupational Hygiene in a Global Perspective”. Alex Burdorf, who was in the panel, made three statements, as follows:

- 1) occupational hygienists in the Nordic countries should be braver and push forward exposure assessment strategies as a core issue in the design of epidemiological studies;
- 2) there should be more awareness on the reasons why workers behave as they do and more efforts towards changing their behaviour, in order to decrease exposure to harmful agents and factors, and,
- 3) we should look at other measures of risk due to hazardous exposure e.g. reduction in life span of working life due to occupational exposure.

Another important issue discussed by the panel and the audience was education of occupational hygienists. Robert Herrick stated that education on exposure and health is a key issue in the Public Health programmes, hence, we should not only focus on exposure and lose the perspective of safeguarding worker’s health and even the health of the community. The hygienists should learn to answer “the questions never asked”.

Swedish participants in the panel stressed the need for occupational hygienists to be represented in all type of organizations to have more control and influence on the

development of occupational and environmental hygiene. Another issue was the need of high quality data and sustainable health policy programmes. This could be implemented if occupational hygienists started more monitoring programmes together with the industry. REACH requires improved exposure models that can be used in exposure scenarios. One tool that was mentioned was the Stoffenmanager, which is a sort of risk banding

USA

Genetic Information Non-Discrimination Act (GINA) of 2008 of the USA: Implications for Occupational Hygiene

Sent by Ilise L Feitshans, ILO

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This summary does not represent official views of the UN, ILO or SAFEWORK. The full text may be obtained from the author.

Passage of the federal Genetic Information Non-Discrimination Act of 2008, (GINA) by the US Congress of the United States of America is one of several federal laws that seek to protect the information arising from the study of the human genome. Key policy questions about personal privacy and the protection against discrimination based on genetic information have been at the forefront of research issues since the inception of the Human Genome Initiative (HGI), a multibillion dollar project that successfully charted the sequencing of key genes and biomarkers across a decade, ending in 2000. In the USA, the federal government, in competition with many other nations, spent over three billion US dollars on the project, which has yielded amazing information and gene therapies for conditions considered untreatable in the past.

GINA represents the first step towards codification in a long standing public policy debate about the gene-environment interaction and how we can adapt to the information genetic science is producing. The law itself has several key interesting features. One of the biggest problems facing individuals who have a genetic condition is the reality that they share the illness with many people, and unlike a cold or flu, its presence can be detected in one person by studying the genetic composition of other family members in some cases. Thus, genetic information brings a new twist to issues of privacy: can the information about one person be legally or morally gleaned from another, and if so is that for benefit, such as research and identifying a population to target with treatments, or for ill use, such as preventing employment or refusing to insure them? And, whose information is it anyway? The individual, the genetic family, or the government who funded the research, or the society who needs to know about genetic conditions by storing information for use by future generations?

The role of genotype, genetic propensities, even the very nature of the interaction between these genetic players

scheme. More exposure data could also be achieved by involving the workers to do self assessment of exposure in well organized campaigns. In Norway it is now in the law that all Occupational Health Services should employ occupational hygienists. It was concluded that occupational hygienists in Sweden should be more heard in media and in the public debate to get more influence on the development of Public Health.

and the work environment ultimately plays a role, if not controls, our individual ability to perform work today and tomorrow. By creating GINA, the US Congress recognized that role of genetic testing, monitoring and research in the workplace is inevitable, and equally inevitable is a discourse fraught with painful social questions such as: eugenics, social engineering, stigma, genetic discrimination, potential liability, assumption of the risk, right to know and health care costs.

Genetics poses hard questions. Genetics is hard to understand but it is important. Perhaps the greatest challenge will be defining not the genetic materials of concern to workers and their employers; and not the criteria for the predictability and reliability of genetic testing, screening and monitoring itself. Genetics is a cross cutting issue, but it has particular importance in specific industries, in agriculture, in the global scientific community, and for small business who will look perhaps a tad more closely at health care and insurance costs compared to larger scale employers. The greatest challenge is in the area of definition of terms.

Very likely, the convergence of new genetic technologies as applied through path breaking research may redefine our collective understanding of "safety", "health" or "disability" and may challenge both the fundamental fairness and scientific underpinning of existing standards, which presumes to protect all workers equally without stratifying the requirements of standards to meet the special needs of particular workplace settings, particular genetic risks or specially vulnerable populations. In the 20th century, OSHA in particular refused to allow such stratification even in the case of reproductive health hazards which impact female workers very differently from male workers, regardless of issues during pregnancy such as fetal protection. Genetic monitoring and related research issues may signal a new era and thus the demise of «one size fits all » regulatory standards. These concerns must be addressed without bankrupting employers, or saddling them with undue liability, but also without creating an underclass of people who lose their

employability due to stigma, discrimination, potential future injury based on genetic propensity, insurance costs or potential liability involving genetic factors and harmful workplace exposures that were previous unexplained or misunderstood.

The Policy Dilemma Approached by GINA

No one wants to make employers pay for problems that are inherited. Existing social policies, such as the tradition that state-based funds for workers' compensation fill the void when the injury or occupational illness comes from previous employment is an example of the precedents for this point. At the same time, society must reconcile this fundamental notion of preventing the unfairness to pay or serve as a repository for liability that the employer did not create from a third party past with three (3) important realities:

1. Employers remain responsible for providing employment and places of employment that are free from recognized hazards under Section 5(a) (1) of the Occupational Safety and Health Act of 1970 (OSH Act). This is without regard to the origin of the effect of the hazard, so long as the employer has control of the premises where the recognized hazard is involved. Certainly, genetic technologies will reveal connections between workplace exposures and genetic transformations in workers. Once these connections have been discovered within the scientific community, this will expand the scope and breadth of the term « recognized hazards », a concept broached upon but not fully examined in GINA.
2. ADA—The Americans With Disabilities Act—applies to genetic conditions, so knowledge in the scientific community that meets the employers obligation to provide safe and healthful employment and places of employment does not mean that an employer can simply fire the worker at risk to prevent harms revealed through genetic technologies. Employers cannot easily escape the co-equal obligation to provide reasonable accommodations to people who can perform the essential functions of their work, despite concerns about genetic factors in the workplace that were heretofore unknown or misunderstood.
3. Lastly, employers cannot use genetic information about a worker to exclude them or their dependents from an employer based health insurance program. This is particularly vital in a country that has no national health insurance and tens of millions of people are uninsured or underinsured.

4. This task is of millennial importance to every workplace

and every worker. To achieve these goals of protecting people about information that technology did not grasp in the previous century, the US Congress passed the "Genetic Information Nondiscrimination Act of 2008".

Case Law Shaping the Legislative Mandate

Unraveling the sequence of the human genome and other advances in genetics has brought eagerly anticipated knowledge about the genetic basis of illness. Genetic testing can allow individuals to take steps to reduce the likelihood that they suffer the effects of a particular disorder and may, with adequate funding, foster the development of better therapies that are more effective against disease or have fewer side effects than current treatments. Nonetheless, there remains potential misuse of genetic information to discriminate in health insurance and employment. Congress was made aware of genetic discrimination in the workplace such as pre-employment genetic screening at Lawrence Berkeley Laboratory, which was the subject of extensive litigation and finally a decision in favor of the employees in that case, *Norman-Bloodsaw v. Lawrence Berkeley Laboratory* (1998). Congress stated that it has a clear compelling public interest in relieving the fear of discrimination and in prohibiting its actual practice in employment and health insurance.

According to the US Congress in the "Findings" that form the preamble for GINA, "Federal law addressing genetic discrimination in health insurance and employment is incomplete in both the scope and depth of its protections. Moreover, while many States have enacted some type of genetic non-discrimination law, these laws vary widely with respect to their approach, application, and level of protection. Congress has collected substantial evidence that the American public and the medical community find the existing patchwork of State and Federal laws to be confusing and inadequate to protect them from discrimination. Therefore Federal legislation establishing a national and uniform basic standard is necessary to fully protect the public from discrimination and allay their concerns about the potential for discrimination, thereby allowing individuals to take advantage of genetic testing, technologies, research, and new therapies".

Conclusion

In particular, occupational hygienists and all health professionals responsible for safety and health in the workplace should be careful that they are not caught in the chain of a greater policy inadvertently creating genetic discrimination, when exercising their duty to recommend in house procedures for safe and healthful working conditions.

UNITED ARAB EMIRATES

Health Authority Abu Dhabi - Safety in Heat Programme

Sent by: Darren Joubert E-mail: djoubert@haad.ae

The Health Authority Abu Dhabi Public Health and Research Department, Occupational and Environmental Health Section recently launched and implemented a successful comprehensive Safety in Heat programme for employers, occupational health and safety personnel and workers in the Emirate of Abu Dhabi.

The programme was launched in May 2009 and ran over the intense summer months where outdoor workers are exposed to extreme heat stress conditions and ambient dry bulb air temperatures can reach over 50°C/122°F with humidity levels of 90%. The problem of heat illness and heat stroke sometimes leading to fatalities is a large problem in the gulf region and the programme was intended to raise awareness amongst exposed workers of the basic preventative measures to be taken, as well as make business owners and employers aware of what their role is and for companies who have safety personnel to make training and other technical resources available to them for improving the monitoring of environmental conditions and educate them about precautionary measures to protect their workforce.

A new heat stress index based upon one used in Australian mining, the Thermal Work Index (TWI), (Bates and Miller 2002; Brake and Bates 2002; Miller and Bates 2007) was validated by researchers from an Australian University for use in the Gulf environment as it has been found that other commonly heat stress indices such as WBGT could not be used for the harsh conditions experienced in summer in the Gulf. An online calculator and other technical resources are available on the website for further information.

Materials and resources developed

The wide range of materials and resources developed varied from technical training manuals and the TWI heat stress index for HSE personnel to simple illustrated leaflets and posters for workers in addition to awareness videos in different languages. All materials are available in softcopy for free download upon registration at the programme websites at www.haad-safe.ae (English) or www.ar.haad-safe.ae (Arabic) and can be freely used and disseminated with acknowledgement to the Health Authority Abu Dhabi.

Some of the various resources developed and the available languages are listed in the next column

Various other technical resources and research reports and related publications from the studies conducted by

Resources	Languages
Posters	English, Arabic, Hindi, Urdu, Malayalam
Roll up banners	English, Arabic
Workers Leaflets Illustrated	English, Arabic, Hindi, Urdu, Malayalam
Supervisors leaflets textual	English, Arabic, Hindi, Urdu, Malayalam
HSE Technical information pack (Procedures and training manual, technical information sheets, DVD training video x 1)	English, Arabic
Worker DVD awareness videos (to be addressed in the future)	English, Arabic, Hindi, Urdu, Malayalam

the Australian researchers on the TWI heat stress index as well as the results of physiological assessment of workers e.g.: heart rates and hydration status etc (during summer and winter conditions) can be downloaded from the downloads page upon registration.

Company participation

The summer 2009 programme reached nearly 500 mainly large companies who self registering into the programme, employing over 800,000 workers exposed to heat stress across 4,500 worksites and 1,800 labour residence sites. Feedback from HSE personnel indicating a high satisfaction level with the programme with 79.6% rated the programme and resources in the very good or excellent categories. The top 3 helpful or very helpful materials provided were posters (97.4%), illustrated workers pamphlet (89.5%) and urine posters (87.7%) which indicated a simple way to monitor personal hydration status using the colour of urine.

Results

Unfortunately statistics are not routinely kept on heat related illness treated at emergency departments in Abu Dhabi so specific data was not available to record the effectiveness of the programme on an Emirate wide basis¹. Statistics that were provided by two large companies in Abu Dhabi who implemented the programme and utilized the educational and awareness resources indicated a significant decrease in heat related cases from the summers of 2008-2009. One company had a 39.7% decrease in heat related first aid cases and a 14% decrease in heat related treatment and emergency cases compared to summer 2008 and the other company had a reduction from 24 emergency cases/20.5 million man

hours in summer 2008 to 6 cases/25.5 million man hours in summer 2009.

Future initiatives

Further goals for summer 2010 will include: Increasing awareness of the Thermal Work Index and environmental monitoring techniques through the provision of training course for HSE personnel and promotion of the online TWL calculator. The Health Authority Abu Dhabi will also be working with equipment manufacturers to develop an economical heat stress meter based upon the TWL algorithm to promote the monitoring of environmental conditions amongst companies in Abu Dhabi and the UAE and Gulf region which will include parameters such as Wet Bulb, Dry Bulb, Globe Temperature and air velocity which are the four parameters required by the TWL index. This will facilitate the technical assessment of the environment by companies to implement applicable control measures linked to TWL indices. Further health promotion materials with appeal to other sectors outside of construction and in other languages such as Bengali will also be developed. The monitoring of the effectiveness of the programme with reduction in heat illness cases over the summer months through use of a hospital based injury surveillance system in 2010 will be carried out.

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