NEWSLETTER

International Commission on Occupational Health - ICOH

Commission Internationale de la Santé au Travail - CIST

Volume 13, Number 1 May 2015

In this number

Message from the President

Dear ICOH Colleagues,

The ICOH triennium 2012-2014 has been very productive. The link among Scientific Committees is reinforced by addressing pressing issues in occupational health, all our National/Area Secretaries and the Board members are making joint effort for enhancing visibility of ICOH including active membership campaign, and we now have the revised Code of Ethics. In all aspects of our work, we have strengthened cooperation with our international allies.

These advances are reflected in the preparation of the 2015 Seoul Congress. The debate at the Congress will surely contribute greatly to reviewing the outcomes of the current triennium. We can further reinforce our joint effort through the ICOH network.

The new developments are based on our collaborative action towards well defined aims. Among the most important aims we all share, I would like to mention the progress and need for more action in the following three aims: (a) promoting locally adjusted proactive processes, (b) facilitating teamwork of stakeholders and (c) upholding ethical principles in our work.

Promoting locally proactive processes

One of the most prominent developments in our current activities is the progress in comprehensive, proactive risk management processes commonly seen in different employment situations. Emphasis is placed on comprehensive measures that can address multifaceted work-related risks, for example, building workplace culture preventing wide-ranging risks including psychosocial risks for both aging and young workers, preparedness for emergencies and newly emerging risks as well as extensive support measures for improving work-life balance.

At the scientific conferences and symposia held by Scientific Committees, I was always impressed by concrete progress in formulating comprehensive, proactive procedures directed at these complex risks. This progress was noted at the Scientific Committees Joint Conference in Sao Paulo in 2013 and other Scientific Committees' meetings. At the Symposium on the Health Protection of the Nanomaterial Workers organized in February 2015 by the Scientific Committee on Nanomaterial Workers' Health, the need for precautionary guidance on such procedures in dealing with emerging risks was specifically emphasized. Many intervention studies reported in these meetings emphasize proactive procedures towards manifold worklife changes needed for preventing occupational illness.

These recent reports also spotlight the importance of adjusting the proactive process to local situations so that multiple risks are managed effectively. In assuring a sustainable risk management, a locally adjusted process addressing broad risks with

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due attention to precautionary guidance should be the key for planning preventive actions that can reduce multifaceted risks.

This progress in developing locally effective proactive processes is important also for extending effective occupational health services to small-scale workplaces facing many social and technical constraints. The theme of the 2015 Congress is "Global Harmony" of risk management in different sectors and workplaces facing similar constraints. We can collaborate towards this end by promoting locally feasible planning of meaningful actions in each local context.

Facilitating teamwork of stakeholders

Another important aim we are sharing is the development of practical ways to facilitate the teamwork of stakeholders responsible for promoting a healthy workplace. As the discussions at our meetings tell us, this development is essential in extending basic and effective occupational health services.

The case studies of healthy workplace initiatives for improving workplace conditions related to occupational illness indicate the clear roles of teamwork involving workers, managers and local agencies with the support from occupational health services and collaborative activities in primary care settings. As the reports from these studies indicate, two typical types of teamwork initiatives addressing multifaceted work-related risks attract our attention.

Firstly, action-oriented teamwork for changing workplace practices has real impact when the stakeholders take part in both the planning and implementation stages of changing the workplace conditions. This is well known as the Plan-Do-Check-Act cycle undertaken jointly at the workplace level. As practical ways of facilitating this teamwork, recent experiences confirm the usefulness of straightforward procedures of planning and implementing realistic improvements for the PDCA process. It is important to apply easily practicable procedures by utilizing action-oriented toolkits for risk assessment and control.

Secondly, also typical is the teamwork of workers, managers and multidisciplinary trainers in participatory approaches developing in many countries. These approaches focus on simple procedures for conducting locally feasible changes. This can facilitate the planning and implementation of immediate improvements with the teamwork of local people and the support services. These improvements reflect basic principles of occupational hygiene and ergonomics and thus lead to real impact at the workplace.

The examples of developments in these two directions are reported in the Triennial Report distributed at the General Assembly during the 2015 ICOH Congress. From recent experiences of ICOH colleagues joining in the Ebola Response Teams in West Africa, we also learn that facilitation of teamwork within each team is essential in planning standard precautionary health-at-work procedures and in implementing participatory action training. These examples show the wide applicability of a stepwise strategy based on teamwork of local people for achieving real impact.

Strengthening ethics-minded partnership

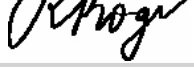
Good occupational health practice requires competent services from occupational health personnel that can effectively support the teamwork of stakeholders mentioned above. In this context, the revised 2014 ICOH Code of Ethics mentions, in a new provision, the need for promoting organizational ethics. This new provision emphasizes that institutions and organizations employing occupational health professionals should adopt a programme of organizational ethics that is aligned with the ethical principles of the Code. This is in line with the new provisions that contracts of employment should describe advisory roles and state professional independence of occupational health professionals.

It is necessary to promote close cooperation of all the partners, internationally and nationally, for securing the ethical conduct of both organizations supported by occupational health teams and individual occupational health professionals.

At the end of my six-year tenure as President, I would like to express my warm thanks to all the ICOH Members for their valuable contributions to ICOH work during the current and previous triennia. Through further pursuing the progress in our work, we can foster our commitment to making the best impact on protecting and promoting the health of workers worldwide.

I look forward to seeing you all at the ICOH 2015 Congress in Seoul.

Kazutaka Kogi
President of ICOH



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News from the Editor

Content of this Issue

Ebola infection in health care workers (HCW) is a typical work-related diseases The Incidence rate of Ebola infection in HCW was reported to be 100 times higher than in the general population. It is mostly caused by insufficient and inadequate health care facilities and improper use of personal protective equipment (PPE) as well as its high infectivity. The Scientific Committee on HCW reported the importance of protecting HCWs from highly contagious infectious diseases, which may follow Ebola infection in the near future. The National Institute of Occupational Safety and Health in the USA (US NIOSH) provides information on PPE of HCWs in order to protect them from Ebola infection.

The Scientific Committee on Toxicology of Metals (SCTM) lost an excellent member in January, Dr. Maths Berlin, who was an outstanding toxicologist of research on metal toxicity, especially mercury and a life-time contributor to the ICOH society. We all remember him as a memorable ICOH colleague.

The SCTM has published the 4th edition of Handbook on the Toxicology of Metals, to which many excellent scientists of the ICOH contributed. ICOH members can get 30% discount by the end of August.

Venue of ICOH Congress 2021

A vote for the ICOH Congress 2021 venue will take place during the 2015 Seoul Congress. Three countries (Australia, India and Morocco) applied for the bidding process. The venue will be decided by the vote of active members during the Congress. The result will be posted on Thursday afternoon, June 4. Information of candidate countries is introduced in the Newsletter and the ICOH website.

Update of the ICOH Congress 2015

ICOH Congress 2015 in Seoul is coming very soon. You may now read this newsletter at the Congress if you didn't receive it before your departure to Seoul. Since the Congress held in 2009, the Korea Occupational Safety and Health Agency (KOSHA) has been committed to preparing the Congress in collaboration with the Korean Society of Occupational and Environmental Medicine (KSOEM) under the support of the Korean Ministry of Employment and Labour (MOEL).

In the upcoming Congress, of course there will be programs such as Plenary and Semi-Plenary sessions to be delivered by outstanding experts in each area of occupational health, not different from ones in past Congresses. However, the Seoul Congress will provide some special events compared to previous Congresses. A policy forum will be held among others substituting the Semi-Plenary session on Tuesday during the Congress, where participants will get the perspectives on the direction of the future occupational health from the higher level officials of governmental, international, and academic societies. You may also learn about the perspective on research from directors of national or governmental institutes on Tuesday and Thursday afternoons.

Participants can also explore occupational health and safety in Asia from the two parallel international conferences. The 25th Korea-China-Japan (KCJ) Joint Conference on Wednesday will give you the current status of occupational health in East Asia. The 30th annual conference of Asia Pacific Occupational Safety and Health Organization (APOSHO) will give you the strategy on injury prevention as well as workers' health in Asia Pacific Region. Of course, special sessions, oral presentation and poster sessions will be delivered as usual. As a whole, 1,629 presentation will be delivered at the Congress.

Participants are also invited to the social activities on Tuesday night as well as the welcome reception. You will learn the Korean culture while walking on the backyard of the old Korean temple, Bongeunsa under a full moon. All participants are also invited to the Gala dinner on Thursday night. I am convinced that they will give you unforgettable memory.

Newsletter Publication

Since I accepted the responsibility of the Newsletter publication in 2009, 16 issues have been published during the

two terms o f duty (2009-2014). Newsletters were published three times a year in the first term, but the 2nd issue was bound with the 3rd issue in the latter triennium. I hope that punctuality can be kept in the coming triennial period.

The newsletter aimed to provide information on members and their activities through ICOH communities, such as Scientific Committees (SCs), national gatherings and regional meetings. It encompassed a president's message, editor's note, special articles with a hot topic, reports from SCs about international conferences, reports from National Secretaries about domestic and regional activities of members, ICOH administrative issues, information of publications, upcoming scientific meetings, information on chairs and secretaries of SCs, and any information related to members.

Each issue intends to provide new information of occupational field under the title of hot topics, which include H1N1 Flu infection, Globally Harmonized System (GHS) on occupational health, nanotechnology, occupational infectious diseases, shift work and health, Control Banding, radiation exposure by the Fukushima accident, occupational health problems in developing Asian countries, ethical guidance for occupational health professionals, work-related cardiovascular diseases, emergency health care at workplace, disability evaluation, ASEAN diagnostic criteria on occupational diseases, and Ebola infection. I believe that these topics could provide a comprehensive insight about occupational health for members.

The Newsletter was distributed to all registered ICOH members in the first year of the triennium, but was limited to only active members, who have paid their membership fee for the rest of the triennium. Published Newsletters have been sent via e-mail first and printed ones were mailed by post.

Appreciation

Finishing my duty as the Editor-in-Chief for two triennial periods, I would like to thank all members for their interest in the Newsletter. My role ends with my term as a board member of ICOH. I hope that the Newsletter has taken the role of a communication tool among members. I would like to express my gratitude to all contributors who submitted their valuable articles, Chairs and Secretaries of Scientific Committees who reported their conferences and activities, National Secretaries who introduced occupational health activities in each country and region, and editorial members who reviewed the draft version. I especially thank Prof. Michelle Riva (University of Milan) who has continuously submitted articles under the title of 'Occupational health in fine arts, music and literature', Suvi Lehitinen (Finnish Institute of Occupational Health) and Mary Ross (South Africa) who always corrected words and sentences of the drafts, and Prof. Louis Patry (University of Quebec) who reviewed a draft of the French version.

Finally, I must appreciate my colleagues at KOSHA, who have taken editorial work including English and French editing of the Newsletters and sent them out to members via online and postal mail.

See you in Seoul, ICOH Congress 2015.

Seong-Kyu Kang
Editor-in-Chief,
ICOH Newsletter
ICOH Board

International Commission on Occupational Health - ICOH

Ebola: A wake-up call to strengthen occupational health and infection control worldwide

The ongoing Ebola outbreak is the largest outbreak since the discovery of the virus in 1976 and is still affecting many countries in West Africa. The three hardest hit regions are Guinea (3044 infections and 1995 deaths), Liberia (8881 infections and 3826 deaths) and Sierra Leone (10 934 infections and 3341 deaths) as of February 18, 2015, but many other countries have been affected; worldwide, health authorities have been scrambling to be prepared if a case arrives in their jurisdiction.

Several factors have contributed to the spread of the outbreak in West Africa: limited access to personal protective equipment and poor or non-existent infection control procedures; fear and misperceptions about the disease resulting in delay in diagnosis, isolation and supportive care; and especially the very weak health systems and lack of health human resources needed for prevention, surveillance and care.

As the virus is spread through direct contact, individuals who incur direct contact with sick patients, corpses, or objects contaminated with blood and body fluids are most at risk of acquiring Ebola. This puts large numbers of people at risk due to occupational exposures, including the healthcare sector but also the transportation sector, and a large variety of other occupations, as shown in Table 1.

Fasina and colleagues (2014) analyzed the epidemiological data of the 2014 Ebola virus disease outbreak in Nigeria in order to determine the rate of occupational infection. The authors reported that 63.2% - 12 cases out of 19 cases that occurred in Nigeria were occupationally acquired and 52.6% (10 out of 19) of these infections were in healthcare workers. The two other occupational cases were a Regional Protocol Officer, who recovered, and a Regional Liaison officer, who died.

Health care workers caring for those affected by Ebola have indeed suffered the most devastating consequences. Table 2 shows the number of reported healthcare workers who have contracted the disease and the number who have died to date, by country, according to World Health Organization statistics. It is noteworthy that the vast majority of infections that occurred outside of West Africa (including in the United States and Spain) indeed are thought to have been occupationally acquired.

Kilmarx and colleagues (2014) characterizes the risk of Ebola in healthcare workers in Sierra Leone to guide prevention efforts. The authors analyzed surveillance data from the national Viral Hemorrhagic Fever database and conducted site visits and qualitative interviews with healthcare workers and site facilitators. The authors reported that the cumulative incidence of disease in healthcare workers was 8,285 per 100,000 compared to 80.4 per 100,000 in the general population in this country.

While infection prevention policies exist in principle, failure of administrative controls leading to breaches of infection control standards is a major factor contributing to occupational infection of healthcare workers (Kilmarx et al., 2014). For example, incorrect triage and isolation of patients suspected of being infected with Ebola Virus is often reported (Kilmarx et al., 2014). An insufficient supply of personal protective equipment and lack of training on proper donning and doffing procedures have also been cited as factors in the 2014 outbreak (Fischer et al., 2014).

Noteworthy, it is thought that healthcare workers in general healthcare facilities are at greater risk than those who work in the Ebola Treatment Centres (ETCs), as the latter are generally now staffed with healthcare workers who have been well-trained and are better resourced for implementing protective measures. Moreover, patients treated at ETCs have been identified as posing an infectious diseases risk to healthcare workers whereas those presenting elsewhere may not yet have been diagnosed. The need to strengthen the policies, procedures, training and equipment for protection of healthcare staff working in all facilities is therefore essential.

The Ebola pandemic has heightened risks from other occupational injuries and illnesses beyond the risk of acquiring the virus itself. The high demand-control imbalance of working in these settings may lead to burnout, and in rare cases, post-traumatic stress disorder. The health facilities affected by this outbreak are in poorly resourced countries and do not have the proper lifting and handling equipment (for example, stretchers, lifting devices, proper beds) to care for the large number of patients who need care - leading to awkward postures and back injuries in care staff. Heavy personal protective equipment leads to heat stress and fatigue. Fatigue in turn contributes to reduced alertness and increased risks of errors, which can have dire consequences in this context. Misconceptions and fear regarding Ebola can lead to violence against Ebola workers, including social mobilization workers, burial workers, and healthcare workers. Malaria is present in the countries affected by Ebola, and workers from abroad who come to help in the Ebola response are at risk of getting this disease as well.

Ebola presents arguably one of the greatest occupational challenges of the past decade. Healthcare workers and other workers in a variety of other facilities and in the community are crucial for stabilizing the epidemic and preventing transmission in the future; protecting their health is therefore essential not only as an obligation to these hard-working individuals but to protect the health of populations in these countries and worldwide. In many countries of the world - including the many that have had no cases of Ebola - protocols and procedures have been recently developed in order to be prepared should a case of Ebola arrive in their country. Importantly, with deforestation and humans beings brought closer to natural reservoirs for diseases like Ebola, it is unlikely that the world has seen the last of such epidemics. It is hoped that the devastating effect of Ebola in West Africa will at least serve as a wake-up call to not only be aware of the ecological impacts of rapidly changing land use and climate change, but also draw attention to the urgent need to strengthen healthcare systems worldwide, including the occupational health and infection control provisions across a large range of occupations. This is sorely needed in West Africa and elsewhere worldwide.

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References

Kentikelenis, A., King, L., McKee, M., & Stuckler, D. (2014). The International Monetary Fund and the Ebola outbreak. The Lancet Global Health. DOI: 10.1016/S2214-109X(14)70377-8

Fasina, F., Shittu, A., Lazarus, D., Tomori, O., Simonsen, L., Viboud, C., & Chowell, G. (2014). Transmission dynamics and control of Ebola virus disease outbreak in Nigeria, July to September 2014. Euro Surveill, 19(40), 20920.

Fischer, W. A., Hynes, N. A., & Perl, T. M. (2014). Protecting health care workers from Ebola: personal protective equipment is critical but is not enough. Annals of internal medicine, 161(10), 753-754.

World Health Organization, (2014). Ebola Virus Disease. Fact sheet No 103. Retrieved January 14, 2015, from http://www.who.int/mediacentre/factsheets/fs103/en/

World Health Organization (2015). Ebola Situation Report. Retrieved January 12, 2015, from http://www.who.int/csr/disease/ebola/situation-reports/en/

Table 1 : Workers at-risk of Ebola-related hazards

Sector	Types of work setting	Examples of specific workers at risk
Healthcare sector	Clinical Setting	Lab staff, nurses
	Homecare setting	Traditional midwifes
	Community setting	Religious leaders
Transport sector	Air transport setting	Flight attendants
	Waterway setting	Ship workers
	Road transport setting	Taxi and bus drivers
	Miscellaneous	Point of entry workers
Miscellaneous	Other setting and work related travels	Business travelers
		Sex workers
		All other workers in countries where Ebola is widespread

Table 2 : Number of Ebola cases and deaths among healthcare workers, as of 28 January 2015

Country	Healthcare worker cases	Healthcare worker deaths
Guinea	162	88
Liberia	371	179
Mali	2	2
Nigeria	11	5
Sierra Leone	283	221
Spain	1	0
UK	1	0
United States	3	0
Total	**834**	**495**

Ebola and Healthcare Workers

Background

The Ebola outbreak in West Africa is the largest in history, currently with more than 23,000 suspected, probable, and confirmed cases and 9,000 deaths. In the three most affected countries - Guinea, Liberia, and Sierra Leone - the case fatality rate among hospitalized patients is approximately 60%. As of April 5, 2015, a total of 861 healthcare workers (HCWs) were infected with Ebola, and 499 had died (Table 1).[1] Only a small number of cases (less than 30) have been treated outside of West Africa. Most of these cases were HCWs or aid workers who contracted Ebola in West Africa and were transported to the United States and Europe for treatment.

Figure 1. Ebola Virus

CDC/NIOSH Role

On August 8, 2014, the World Health Organization (WHO) declared the Ebola epidemic in West Africa a Public Health Emergency of International Concern.[2] The U.S. Centers for Disease Control and Prevention (CDC) activated its Emergency Operations Center (EOC) in July of 2014 to help coordinate technical assistance and activities with partners. Because HCWs are at such a high risk for exposure to Ebola, CDC's National Institute for Occupational Safety and Health (NIOSH) became involved to ensure worker safety and health throughout the Ebola response, both abroad and domestically. NIOSH worked with other divisions within CDC to develop recommendations to assist HCWs with infection prevention and control practices.[3]

The large scale of the Ebola epidemic has directed particular attention to the personal protective equipment (PPE) used by HCWs to reduce their risk of contracting the disease. PPE is designed to create a barrier to prevent pathogens from entering the body through the mucous membranes and any broken skin. Reports from HCWs in West Africa indicate that some personnel can wear their PPE for only 40 minutes at a time, due to the high ambient temperature and humid conditions.[4] Even when patients with Ebola are treated in air-conditioned environments in the United States, uncomfortable PPE is a common complaint among HCWs.

On September 26, 2014, President Barack Obama announced a "Grand Challenge" in a speech at the Global Health Security Agenda Summit in Washington, D.C. The Grand Challenge calls for the design of improved PPE for HCWs to wear while treating patients with Ebola. NIOSH, along with other divisions within CDC, is partnering with the U.S. Agency for International Development (USAID), the White House Office of Science and Technology Policy (OSTP), the U.S. Department of Defense (DOD) and other U.S. agencies to initiate this Grand Challenge. The USAID-led effort consists of several initiatives to develop and test entirely new PPE and to modify current PPE to address issues of PPE protection and comfort for HCWs. NIOSH has been evaluating the current PPE ensembles used in West Africa and around the world and continues to pursue national and international collaborative efforts to develop solutions to improve PPE configurations in the future.[4]

Healthcare Workers

Clinical Characteristics

HCWs caring for patients with Ebola are at the highest risk of becoming sick because they may come into contact with infected blood or other body fluids. The virus is spread to others through direct contact with blood or body fluids (including but not limited to urine, saliva, sweat, feces, vomit,

Figure 2. Bryan Christensen, epidemiologist for CDC's Division of Healthcare Quality Promotion

breast milk, and semen) as well as objects (like needles or syringes) that have been contaminated with the virus.[5] Signs and symptoms of Ebola may appear anywhere from 2 to 21 days after exposure, although onset is typically 8 to10 days. Signs and symptoms include fever, severe headache, muscle pain, weakness, fatigue, diarrhea, vomiting, abdominal pain, and unexplained hemorrhage.[6]

Infection Control and Prevention

Preventing transmission of Ebola in healthcare settings requires an infection control plan that prioritizes (1) identifying and isolating people who may have Ebola; (2) protecting patients and HCWs; (3) cleaning up safely; and (4) managing patients with suspected Ebola safely and compassionately.[7] Within healthcare settings, staff should designate appropriate areas for screening and safely isolating people suspected of having Ebola before they enter the facility. It is very important that all patients be screened so that those who may have Ebola can be separated from other patients, and so HCWs know when to use appropriate PPE while caring for these patients. During patient care, healthcare staff must take steps to prevent the spread of the virus, such as rigorous hand hygiene, donning (putting on) and doffing (removing) appropriate PPE at all times and using proper precautions when handling sharps. HCWs should clean and disinfect all patient care areas meticulously according to strict protocols. Plans should include information about informing the proper public health authorities of suspected or confirmed cases of Ebola and ensuring patients and families receive appropriate information and support at all stages of care.[8]

Personal Protective Equipment

CDC's current recommendations for donning and doffing PPE[9] are intended for HCWs managing patients with Ebola in U.S. hospitals and emphasize the importance of training, practice, competence, and observation of HCWs PPE donning and doffing correctly. The following key principles are highlighted:

- Prior to working with patients with Ebola, all HCWs must have received comprehensive training and have demonstrated competency in performing all Ebola-related infection control practices and procedures, and specifically in donning/doffing proper PPE.
- While working in PPE, HCWs caring for patients with Ebola should have no exposed skin or mucous membranes.
- Personnel providing care to patients with Ebola must be overseen by an onsite manager at all times, with each step of every PPE donning/doffing procedure supervised by a trained observer to ensure correct completion of established PPE protocols.

Domestically and internationally, there has been a substantial and sudden increase in demand for PPE due to the Ebola response. Hospital administrators should review CDC's guidance before determining how much and what types of PPE are needed and ensure they have the minimum amount of PPE on hand to match particular HCW roles.[10]

Conclusion

HCWs continue to play an important role in the Ebola response. Although they are most at risk of becoming sick due to the likelihood of exposure to blood or body fluids while caring for patients with Ebola, proper implementation of infection control and prevention measures, including appropriate use of PPE, can mitigate this risk. CDC/NIOSH remains dedicated to protecting HCWs through the development of guidance and the identification of research priorities. For more information, please visit http://www.cdc.gov/vhf/ebola/ and http://www.cdc.gov/niosh/topics/ebola/.

Kimberly A. Brinker[1] and Lisa Delaney[2], NIOSH, USA

References

1. WHO [2015]. Ebola Situation Report - 8 April 2015 [http://apps.who.int/ebola/current-situation/ebola-situation-report-8-april-2015]. Date accessed April 13, 2015.
2. WHO [2014]. Ebola Virus Disease [http://www.who.int/mediacentre/factsheets/fs103/en/]. Date accessed February 6, 2015.
3. CDC [2015]. Ebola (Ebola Virus Disease) - U.S. Healthcare Workers and Settings [http://www.cdc.gov/vhf/ebola/healthcare-us/index.html]. Date accessed February 6, 2015.
4. NIOSH Science Blog [2015]. Fighting Ebola: A Grand Challenge for Development - How NIOSH is Helping Design Improved Personal Protective Equipment for Healthcare Workers [http://blogs.cdc.gov/niosh-science-blog/2015/02/05/ebola-ppe/].
5. CDC [2014]. Ebola (Ebola Virus Disease) - Transmission [http://www.cdc.gov/vhf/ebola/transmission/index.html]. Date accessed February 6, 2015.
6. CDC [2014]. Ebola (Ebola Virus Disease) - Signs and Symptoms [http://www.cdc.gov/vhf/ebola/symptoms/index.html]. Date accessed February 6, 2015.
7. CDC [2014]. Ebola (Ebola Virus Disease) - For General Healthcare Settings in West Africa: Four Keys to Infection Control [http://www.cdc.gov/vhf/ebola/hcp/international/keys-to-infection-control.html]. Date accessed February 6, 2015.
8. CDC [2014]. Ebola (Ebola Virus Disease) - Questions and Answers: Infection Control in General Healthcare Settings in Countries with Widespread Ebola Transmission (Guinea, Liberia, and Sierra Leone) [http://www.cdc.gov/vhf/ebola/hcp/qa-infection-control-general-healthcare-widespread-ebola-transmission.html]. Date accessed February 6, 2015.
9. CDC [2014]. Ebola (Ebola Virus Disease) - Guidance on Personal Protective Equipment to be Used by Healthcare Workers During Management of Patients with Ebola Virus Disease in U.S. Hospitals, Including Procedures for Putting On (Donning) and Removing (Doffing) [http://www.cdc.gov/vhf/ebola/healthcare-us/ppe/guidance.html]. Date accessed February 6, 2015.
10. CDC [2014]. Ebola (Ebola Virus Disease) - Considerations for U.S. Healthcare Facilities to Ensure Adequate Supplies of Personal Protective Equipment (PPE) for Ebola Preparedness [http://www.cdc.gov/vhf/ebola/healthcare-us/ppe/supplies.html].

Table 1 : Ebola Virus Disease Infections in Healthcare Workers in Guinea, Liberia, and Sierra Leone, as of April 5, 2015.

Country	Cases	Deaths
Guinea	186	94
Liberia	372	184
Sierra Leone	303	221
Total	**861**	**499**

Metal Exposures in Occupational and Environmental Settings

Widespread Exposure to Metals Contributes to Global Burden of Disease.

The use of metals has expanded substantially in the last century and gives rise to widespread exposure of humans. It has long been recognized that metals are important toxic agents that may cause acute and chronic poisoning in metal workers and population groups with high exposures. In recent years evidence has been presented indicating that low level exposures to metallic compounds contribute to the occurrence of several common diseases. The World Health Organization (WHO, 2009) has estimated that on a Global basis, 143,000 deaths and nearly 9 million disability-adjusted life years (DALYs; i.e. years of healthy life lost) were caused by lead exposure in 2004. Although lead exposure in the general population of many countries has decreased since 2004 because of the continued phase-out of lead in gasoline, several recent epidemiological studies support the notion that low-exposure effects of lead occur in addition to those considered by the WHO (2009). It is therefore quite possible that the present global burden of disease caused by lead exposure is the same or greater than the one estimated in 2004.

In addition to the estimates of lead-related disease and mortality, there are other well documented effects that were not included in the WHO estimates of the global burden of disease. This organization further summarized data indicating 9100 deaths and 125,000 DALYs per year in Bangladesh from arsenic in drinking water and that mercury exposure (mainly methylmercury) through fish consumption causes cognitive deficits and mild retardation in a considerable number of children. An increased incidence of myocardial infarction has been reported in populations with a high intake of methylmercury from fish and a low intake of polyunsaturated fatty acids. The public health impact of this observation of interaction between a nutritional factor and a toxic metal compound may be considerable. There is evidence for a role for relatively low occupational exposure to manganese as well as exposure in the general environment as a contributory factor to the increasing prevalence of Parkinson disease and there is a potentially great importance of metal exposure in early life as a risk factor for neurodegenerative disorders later in life. Recent epidemiological evidence indicates a role for cadmium in the general environment in increasing the occurrence of renal effects and osteoporosis, as well as cardiovascular diseases. There is no doubt thus that exposure to toxic metals and their compounds represents important causal factors contributing to the global burden of disease. Deficient dietary intake of essential metals in food in a global perspective was estimated by the WHO (2009) to cause 433,000 deaths and 15,580,000 DALYs from zinc deficiency and 273,000 deaths and 19,734,000 DALYs per year from iron deficiency.

In view of the considerable global burden of disease caused by metals there is an obvious need for preventive action.

New knowledge on Metallic Nanoparticles provides insight and explanation of adverse effects.

New materials containing metals or metal oxides have been developed within the framework of nanotechnology. Some of these materials have medical uses implying human exposures, and several others can cause exposure in manufacturing and some in end uses. Welding fume is an example of a well-known occupational exposure involving particles of nano-size. Nanoparticles have a tendency to agglomerate in the air, changing deposition and uptake patterns in the respiratory tract.

After uptake, nanoparticles in biological fluids will be covered by a Bio-corona that influences their biological properties. The high biological activity of nanoparticles is explained by their much larger surface area per milligram compared to larger particles. Nanoparticle interactions with biomolecules may cause toxicity, to a large extent by the formation of reactive oxygen species. Such phenomena may explain the high relative toxicity to the lung of freshly generated metal fumes. Direct interaction between nanoparticles and biomolecules is possible; for example, specific size fractions of gold particles are toxic to DNA. There is a large and expanding field of science characterizing the biological and toxicological properties of nanomaterials. In vitro studies and mathematical modeling are used for hazard ranking of metallic nanoparticles.

New Knowledge on Gene-Environment Interactions Pinpoints the Role of Specific Genes for Disease Development.

Epidemiological studies of Gene-Environment Interactions has recently been developed into a new specialized scientific field. These epidemiological analyses aim at identifying specific genes that are related to increased occurrence of specific diseases and other adverse health effects. The best example in the field of metal exposures is the identification of sensitivity for development of chronic beryllium disease among persons with a specific variant of Human Lymphocyte Antigen. Another is the different relationships between adverse effects of lead in relation to blood lead levels depending on variants of aminolevulinic acid dehydratase (ALAD).

Inadequate recycling of electronic waste causes metal poisoning in developing countries.

Adverse health effects resulting from inadequate recycling of batteries and e-waste (including computers, cell phones, printers and TVs) occur particularly in developing countries and newly industrialized countries because there is a lack of legislation of adequate handling and recycling systems and/or their implementation. E-waste is partly imported from industrialized countries and partly generated locally in developing and newly industrialized countries. The Basel Convention, 1989, prohibits the export of defunct electronic equipment for disposal in developing countries, but export often occurs as used electronic equipment and its functionality is seldom checked. Unsafe recycling of used lead batteries is a large public health problem. For example, 18 cases of lethal lead poisoning was reported in Senegal 2007-2008. In the European Union legislation exists (WEEE directive EU 2002/96/EG; 2012/19/EU) and implementation is underway, requiring adequate application of preventive methodology. In many other industrialized and in most developing countries legislation and preventive measures are lacking despite the obvious need to control this rapidly increasing waste category.

Increased use of metals and particularly some new uses cause human exposures that are in need of adequate risk assessment.

There are many new uses of metals in the form of nanoparticles which occur in various consumer products. Human exposures may occur not only when manufacturing such products, but may also expose consumers and there is a need for adequate risk assessment and application of preventive measures. Metallic nanoparticles in the form of semiconductor nanocrystals or quantum dots have been developed to visualize specific cellular events which are studied microscopically. Such nanoparticles made from CdSe have been used in vitro in living cells and in vivo in experimental animals. Tissue concentrations of Cd sometimes occur that cause concern for toxic effects. It is therefore important not to use these techniques on living humans without careful evaluation of the potential toxicity. Super-paramagnetic iron oxide nanoparticles (SPION) are injected into human patients in order to increase imaging possibilities in MRI. Doses used are considered without toxic effects and have been approved by authorities based on toxicological evaluations.

Another new and increasing use of metals is in medical devices, for example stents for cardiovascular treatment and in orthopedic implants. Such uses imply obvious risks for substantial internal metal exposures that must be evaluated by authorities before approving the use of such devices.

Improved knowledge-base for professionals

The increased recognition of metal exposures as important causes of the existing global burden of disease as well as the increased human exposure caused by new uses of metals, presents new challenges for professionals in medicine, toxicology and chemical safety including factory doctors and nurses, occupational health administrators, those responsible for environmental safety in various industries and governmental agencies as well as administrators responsible for approving the use of medical devices and those developing and implementing legislation for consumer safety including chemical safety and food safety. The improved knowledge generated in recent years is required in order to adequately evaluate the present situation. For example, routes of human exposure may include exposure to airborne ultrafine- or nano-particles. Knowledge must be available on measurement techniques for particles in air and how exposures relate to inhaled dose and uptake in tissues. Other routes of exposure are also important and the possibilities of biological monitoring must be known. It is important to have access to the most recent information in order to evaluate obtained results in a risk assessment framework. For an adequate assessment, awareness of existing toxicokinetic and toxicodynamic data is essential as well as , when appropriate, consideration of the balance between intakes by various routes, internal dose and interaction with essential metals and other factors.

Conclusions

In view of the importance of metal exposures for the global burden of disease, improved preventive action is needed. To reach this goal it is very important to disseminate information on human metal exposures and related adverse health effects, not only to scientists and administrators, but also to local doctors, nurses and engineers in various companies and in communities where such exposures take place in order for them to better meet the new challenges and to understand how occupational exposures can interact with exposures from the general environment and how a healthy total environment can be created that is promoting good health.

Gunnar F. Nordberg, Bruce A Fowler and Monica Nordberg

References

Nordberg GF, Fowler BA and Nordberg M. (Eds) (2015) Handbook on the Toxicology of Metals 4th edition. Academic Press/Elsevier. ISBN 978-0-12-398292-6 (Volume I), ISBN 978-0-12-398293-3 (Volume II).

WHO 2009. www.who.int/healthinfo/global_burden_disease/

A Condolatory Address for Prof. Maths Berlin

It is with great sadness that we announce the death of Professor emeritus MD, PhD Maths Berlin on January 26, 2015 at the age of 83.

Dr. Berlin presented his doctoral thesis on mercury toxicology in 1963 at Karolinska Institutet, Stockholm. He was an Associate professor and deputy head of the department of Environmental health at the National Institute of Public Health 1963-1967. During this time, he also spent a year as a visiting professor at the University of Rochester in Rochester, NY, USA where he worked together with one of us (TWC). In 1967 he was appointed as a full professor of environmental medicine and chairman of the Department of Environmental Hygiene at the University of Lund in Lund, Sweden. His doctoral thesis and his subsequent experimental research was pioneering in introducing a scientific approach to understanding metal metabolism. Important fundamental toxicological differences among various chemical forms of mercury were demonstrated. This information has been of great importance within metal toxicology and human health risk assessment. In Lund his research in environmental medicine also included research on benzene and sleep disturbances from noise in addition to his experimental research on mercury. Maths Berlin was engaged and instrumental in getting WHO approval for the epidemiological studies on prenatal exposures to methyl mercury from fish consumption in the Seychelles. This research has been performed mainly by the University of Rochester team of scientists and continues to this day. Even in the last year of his life, Dr Berlin was actively performing research on another aspect of mercury toxicology namely the immunological effects in humans of mercury released in dental practice.

Dr Berlin was on leave from Lund University from 1983-88 when he worked for the World Health Organization (WHO) at the MARC Monitoring and Assessment Centre, University of London, UK. He served as chairman or member of a number of WHO criteria documents on metals during this period.

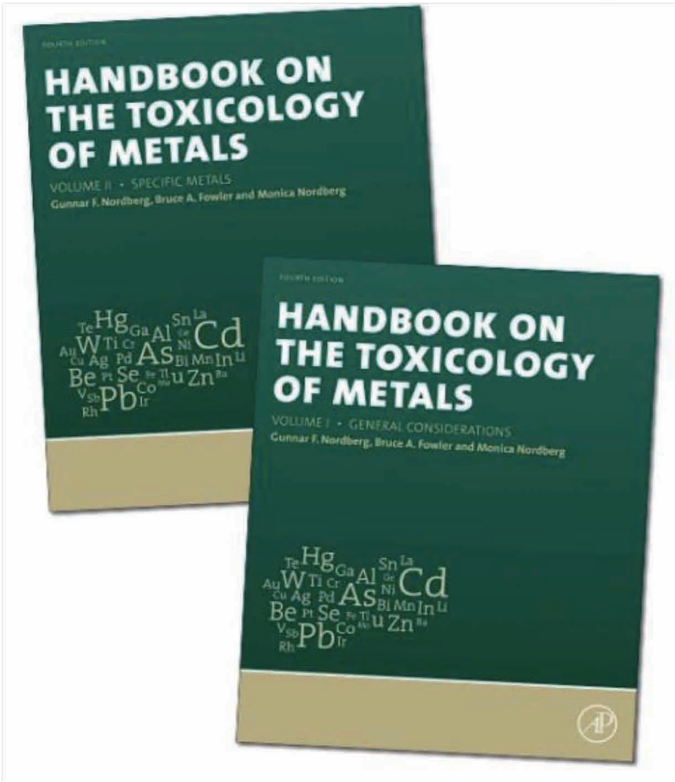
Dr. Berlin served ICOH for many decades. He was one of the founding members of The Scientific Committee on the Toxicology of Metals (SCTM) under the International Commission on Occupational Health inaugurated in 1969 and he participated in a number of international workshops organized by SCTM where research results were summarized and consensus conclusions were published as books and reports. These reports have had a major influence on the development of risk assessment methods in occupational and environmental medicine and public health. The international impact of these methods on regulations for the control of chemicals released into the environment cannot be overstated. In the last year of his life Dr Berlin completed the new chapter on Mercury for the 4th edition of the Handbook on the Toxicology of Metals, this book being an important joint effort by members of SCTM.

In summary, the SCTM has lost a long-term committee member who made many valuable scientifically based contributions to our discussions and joint publications. We, who were honored to know and collaborate with him, will remember him as a great scientist and a reliable and good friend.

On behalf of the SCTM

Lars Barregard, Monica Nordberg, Bruce Fowler, Gunnar Nordberg, Thomas W. Clarkson

Handbook on the Toxicology of Metals



The 4th Edition of Handbook on the Toxicology of Metals was published in 2015 (ISBN978-0-444-59453-2 (print 2 volume set). List price: US$ 410). It was edited by Gunnar F. Nordberg, Bruce A. Fowler and Monica Nordberg.

The Volume 1 contains general information on toxicology of metals, such as sampling, analysis, toxicokinetics, toxicity, exposure assessment, biological monitoring, molecular mechanisms, dose-response relationship, gene-environment interactions, epidemiology, essential metals, neurotoxicology, cardiovascular disease, renal effects, carcinogenicity, immunotoxicology, reproductive effects, risk assessment, and diagnosis and treatment of metal poisoning.

The Volume 2 describes characteristics of each metals. They are aluminum, antimony, arsenic, barium, beryllium, bismuth, cadmium, chromium, cobalt, copper , gallium, germanium, gold, indium, iridium, iron, lanthanum, lead, lithium, manganese, mercury, molybdenum, nickel, palladium, platinum, rhodium, selenium, silver, tellurium, thallium, tin, titanium, tungsten, uranium, vanadium, and zinc.

ICOH members enjoy 30 percent discount on the printed or electronic version of this book. **Please use code BIOMED315 when in the shopping cart, ordering on internet http://store.elsevier.com/product.jsp?isbn=9780444594532 or refer to this code when ordering by telephone: USA, Canada +1(800)460-3110 or +1 3144478010; Asia Pacific +65 63490222; Japan +81 335896370; Europe, Middle East, Africa +44 (0)1865844644**

Candidate Countries for ICOH 2021 Congress

Australia

Melbourne, Australia is very pleased and proud to put forward a bid to host the ICOH 2021 Congress. By sharing scientific knowledge and solutions in a stimulating and friendly environment, our aim is to improve occupational health locally, regionally and globally.

The Host City

Rated the 'World's Most Liveable City' for the fourth year in a row in 2014, Melbourne is the ideal host city for ICOH 2021. It is one of the world's safest, friendliest and cleanest destinations, with very low air pollution levels.

As well as being Australia's major sporting and cultural events capital, Melbourne has a broad multicultural population and is an important destination for scientific meetings, reflected in its exceptional record of successfully hosting major conferences and catering for the special needs of international delegates.

The city is Australia's knowledge, research and innovation capital, with an active network of leading occupational health and safety research institutes. A number of field visits will be available to delegates during ICOH 2021 to demonstrate solutions which have been developed to improve worker health and safety.

ICOH 2021 in Melbourne will offer you a rich social program and an excellent variety of pre- and post- touring options. It is a great opportunity to take your family to experience unique Australian wildlife, excellent food and wine, sports and culture, all in a safe and welcoming environment.

The Venue and Accommodation

The proposed congress venue is the world-class Melbourne Convention and Exhibition Centre, a fully-integrated venue set on the iconic Yarra River, and only a 20 minute drive from the international airport. The venue is centrally located and surrounded by bustling restaurants, entertainment, and a variety of shops.

Melbourne has a superb range of accommodation to suit all budgets, tastes and delegates' needs. Most of Melbourne's city hotels are within walking distance of the Convention Centre, meaning delegates can easily make their own way to and from the venue.

Host Organisation and Team

The Host Organisation is the Australasian Faculty of Occupational and Environmental Medicine (AFOEM), the Occupational Physician professional and training body for Australia and New Zealand. AFOEM has received extensive support for ICOH 2021 from related occupational health and safety professional bodies, government agencies, academia, the tourism industry and other occupational health stakeholders in the region.

The Melbourne 2021 bid is being led by Professor Malcolm Sim, ICOH Board Member, and Professor Dino Pisaniello, ICOH National Secretary for Australia.

Highly qualified and experienced local organising and scientific committees have been established which will ensure a stimulating, informative and interactive scientific program.

ICOH 2021 in Melbourne will focus on engaging experienced, as well as early and mid-career occupational health professionals from around the world. Scholarships and other support will be provided for delegates from low income countries.

We look forward to the opportunity of welcoming delegates from all around the world in 2021.

India

About Indian Association of Occupational Health

The Indian Association of Occupational Health (IAOH) was founded a year after India attained freedom in 1947. It is a pioneer organization in occupational health amongst developing countries. IAOH is India's leading professional body active in the development and promotion of these disciplines with 3000 members across 23 branches. It is affiliated to the International Commission on Occupational Health (ICOH). The World Health Organization has accorded the IAOH a partnership status in the area of strengthening Occupational Health in the Asian region. The IAOH enjoys consultative status with the Ministry of Labour, Government of India in matters governing occupational health policy.

Why Should ICOH have the congress in India?

India is a large country with a population of 1.3 billion and a workforce of over 600 million. It already ranks as the third economic power globally (GDP by PPP). India's working sector is growing fast not only in the traditional manufacturing sector but also in the emerging services sector. India is well known for its dominance in the global IT sector. Majority of the workforce are in the informal economy, predominantly agriculture and services. An earlier study, based on an epidemiological analysis of the burden of occupational illness in the country, estimated that there are close to 2 million cases of occupational illness and over 18 million injuries (mostly unreported) in the country.

The ICOH Cancun Resolution (March,2012) advocates: “Joining our forces and collaborating with other international and national occupational health organizations and actors for ensuring every working individual in the world the right to the enjoyment of the highest attainable standard of occupational health as a part of their basic human rights”.

In keeping with the Cancun resolution if developing nations are to be supported and encouraged - hosting in India would be the right way forward. Given the burden of occupational illness in the country, the Congress will help augment occupational health in India.

About the venue - Hyderabad

Hyderabad is the capital city of the Indian state of Telangana. The city is a hub for film industry, world-class public and private hospitals, Central and For a tourist, Hyderabad is one place that offers a fascinating panorama of State Research Institutions, Information Technology and Biotech and Pharma industries.

Endearingly named the Pearl City, Hyderabad offers a variety of tourist attractions such as age-old Heritage monuments, Gardens and Resorts, Lakes, Parks, Museums, delectable cuisine and an exciting shopping experience. the past, and is a blend of rich cultural and historical traditions spanning a history of 400 years. The city has an average temperature of 22-34 degree. Celsius, and the best time to visit is from September to March.

To top it all, the Novotel Convention Centre where we propose to hold this Congress, is a world-class facility, par excellence!

Morocco

Marrakesh is expecting you!

With the strong support and the eagerness of the Moroccan authorities, the commitment of the local economic and social sectors, and associative actors, the Moroccan professionals, members of the International Commission on Occupational Health, are pleased to invite you to Marrakesh in 2021, for the 33rd edition of the ICOH Congress.

We want this edition, to be outstanding. Organized by a developing country, which is distinguishing itself by its institutional, political and social reforms, this Congress will be the occasion to exchange and share successful experiences and expertise in Occupational Health. We want this 33nd edition to be a know-how on the global aspects of occupational health issues, and to allow attendees to build concrete and adjusted measures in a collaborative spirit.

What better than Marrakesh atmosphere to produce strong and relevant ideas in a city characterized by its art of living, its scents and colors! What can guarantee the success other than its experience in hosting major international events with over 350 world-class references to its credit!

You are most welcome in Morocco, a land of tradition and legendary hospitality, a land of cultural diversity, a haven of peace and stability, a united country, confident and unanimous around an old monarchy of more than twelve centuries.

Marrakech vous espère!

Forts du soutien officiel et de l'enthousiasme des autorités Marocaines, de l'engagement des acteurs locaux du tissu économique, social et associatif, ainsi que des réalisations et des projets structurants lancés au Maroc dans le domaine de la santé au travail, les professionnels Marocains, membres de la Commission Internationale de Santé au Travail, vous invitent à Marrakech en 2021 pour le 33ème Congrès de la CIST.

Cette 33ème édition, nous la voulons différente, faite par un pays en développement qui se distingue par ses réformes institutionnelles, politiques et sociales. Nous la voulons, une édition basée sur l'échange et le partage d'expériences réussies et de savoir-faire. Nous la voulons, une édition qui intégre l'aspect global de la problématique de la santé au travail, et qui permet aux congressistes de construire des mesures concrétes et adaptées dans un esprit de collaboration Nord-Sud.

Quelle meilleure atmosphére pour produire des idées fortes et pertinentes, que celle de Marrakech, avec son art de vivre, ses parfums et ses couleurs! Quelle meilleure garantie de réussite, que son expérience dans l'organisation d'événements internationaux majeurs, avec plus de 350 références mondiales à son actif!

Vous êtes les bienvenus au Maroc, terre de tradition et d'hospitalité légendaire, terre de pluralité culturelle, un havre de paix et de stabilité, un pays uni, confiant et unanime autour d'une monarchie vieille de plus de 1200 ans.

ICOH Congress 2015 Program

Special Events at ICOH Congress 2015

1. Policy Forum(Global Policy Forum/ Asian Policy Forum)

Policy Forum will provide a platform for dialogue among experts to ensure safe and healthy environment for workers all around the world.
Come and join the forum to talk about future strategy and new plan for occupational health with representatives from international organizations, labor policy specialist, and occupational health policy makers from each continent.

Global Policy Forum

- **Date** : June 2 (Tue.), 11:00-13:00
- **Venue** : Auditorium (3F), COEX
- **Chair** : Dr. Kazutaka Kogi (ICOH), Dr. Jorma Rantanen (ICOH)

Asian Policy Forum

- **Date** : June 1 (Mon.), 15:00-17:40
- **Venue** : 401 (4F), COEX
- **Chair** : Ms. Ingrid Christensen (ILO, Sr. Specialist)

2. Director's Forum

Director's Forum will present the opportunity to learn research activities and strategies of major occupational safety and health research institutes over the world.
Join the forum to meet directors from the world's leading research institutes and share insights with them.

- **Date** : June 2(Tue.) & June 4(Thu.), 14:15-17:30
- **Venue** : Auditorium (3F), COEX

3. The International Safety and Health Exhibition

The International Safety and Health Exhibition is a high-level event which brings together organizers, sponsors, international organizations (ICOH, WHO, ILO, etc.) and over 50 leading companies who have state-of-the-art equipment and analysis (measurement) methods.

- **Date** : June 1 (Mon.) - June 4 (Thu.), 2015
- **Venue** : Hall D1 (3F), COEX
- **Exhibition Items**
  - High-tech technology and accident prevention equipment and protective equipment
  - Latest equipment to measure and analyze occupational environment
  - Creative ergonomic equipment to prevent musculoskeletal diseases
  - Fire and explosion preventive equipment including gas leakage detector, electric explosion proof, etc.
  - Up-to-date safety & health services and consulting
  - Latest safety & health education and training, software, periodicals, etc.
  - Latest safety & health education and training, software, periodicals, etc.
  - Promotion of international organizations and international safety & health related institutions

- **Enjoy at the Exhibition**
  The Exhibition place gives you the opportunity to take a rest at cafes with unique themes by sharing the latest trend in global occupational safety and health.
  - **ICOH Cafeteria** : You can buy various foods and beverages such as coffee, tea, soft drink, cookies, sandwiches, etc.
  - **ICOH Plaza** : Any participants can enjoy Korea's unique culture of 'pyeong sang', a low wooden bench, in which participants can sit and lie down to take a rest.
  - **Media Café** : See and enjoy various types of media content including videos about safety and health and K-Pop.
  - **Internet Café** : You can get free internet access in the Internet Café equipped with laptops, table PC, and printers.
  - **Book Café** : Safety and health booklets published by KOSHA will be available in the Book Café, where participants also can share their books with others.
  - **Study Café** : Whenever you want to discuss with others, use the Study Café in which tables are available for groups
  - Seoul Tourism Organization will provide various experience programs of Korean culture.

4. Parallel conferences

30th APOSHO Annual Conference

APOSHO 30 to be held concurrently with the 31st International Congress on Occupational Health allows APOSHO members, delegates and safety and health specialists from around the world to have a great opportunity of participating in an integrated and shared conference program featuring a similar theme of "Harmony for Occupational Safety and Health".

- **Date** : May 31 (Sun.) - June 5 (Fri.), 2015
- **Venue** : COEX, Seoul
- **Participants** : 200

25th Korea-China-Japan Joint Conference

The 25th Korea-China-Japan Joint Conference on Occupational Health will be held concurrently with the 31st International Congress on Occupational Health. This parallel conference brings together occupational health leaders from Korea, China, and Japan to share experience and knowledge on occupational health issues.

- **Date** : June 3 (Wed.), 2015
- **Venue** : Grand ballroom 104,105 (1F), COEX
- **Partic nts** : 150

10th Global Network Meeting of the WHO Collaborating Centers

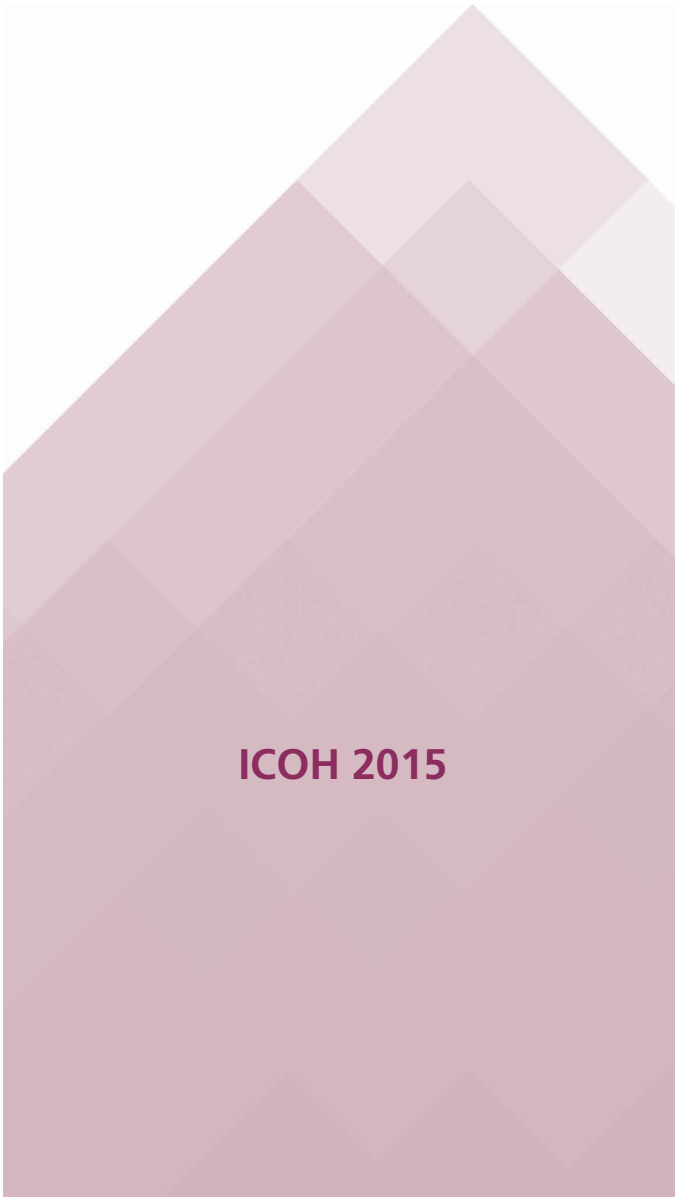
The 10th Networking Meeting will comprise plenary sessions and group discussions. In the margins of the meeting there will be opportunities for CCs to learn about how to further engage in planning and implementations implementation of the GPA (Global Plan of Action on Workers Health 2008-2017) through parallel meetings of the technical working groups and regional networks.

- **Date** : May 27 (Wed.) - May 30 (Sat.), 2015
- **Venue** : Seogwipo KAL Hotel, Jeju, Korea
- **Participants** : 100

ISSA Construction Section Symposium

The Symposium Title and Themes is Advancing Construction Safety and Health: Building on and adapting the ISSA-C Experience.

- **Date** : June 4 (Thu.) - June 5 (Fri.), 2015
- **Venue** : 203A, 203B (2F), COEX
- **Participants** : 100



ICOH 2015 Programs at a Glance

The major programs of the Congress would include: Keynote speeches, semi-plenary sessions, symposia, special sessions and poster sessions and so on, under the theme that helps realize the congress' motto.

- **ICOH Congress 2015 Address**: http://www.icoh2015.org

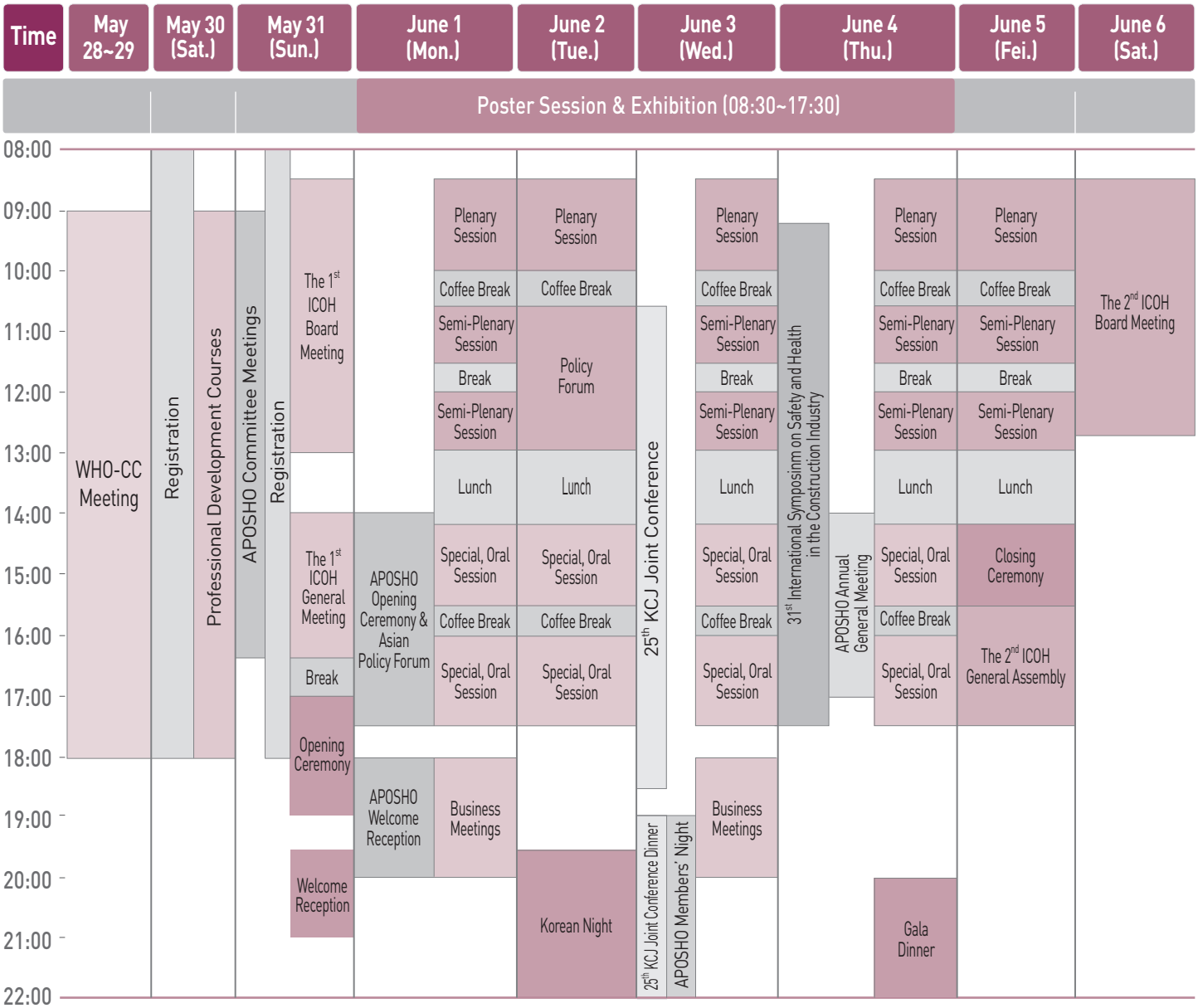


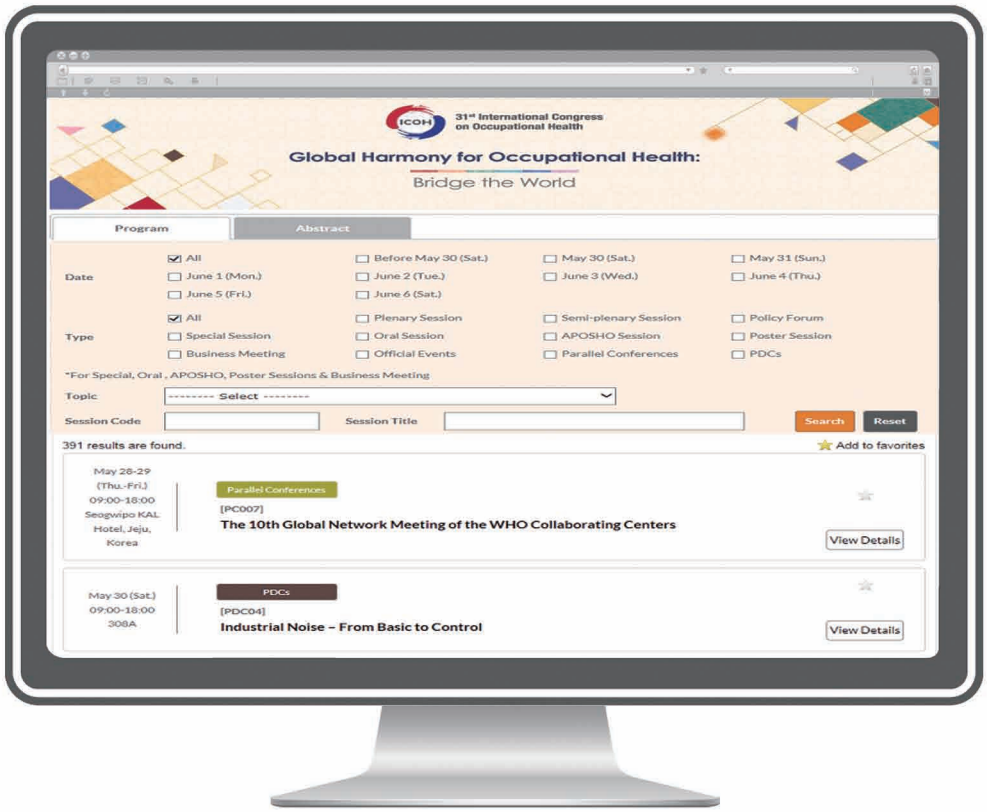
Figure 1. ICOH Congress Program with parallel conferences

2. Detailed program

Detailed program gives easy access to information related to major programs and sessions of ICOH Congress 2015. You can search not only sessions but also abstracts by abstract number, name of author, and title.

- You can add any your interested program to 'My Favorites' by clicking on star-shaped button. The added favorites will be seen on 'My Favorites' tab of My Page on the ICOH 2015 official website and mobile page.
- **Detailed Program Address**: https://online.icoh2015.org/program/
- **Mobile Address**: www.icoh2015.org/mobile/eng

Figure 2. Detailed proqram



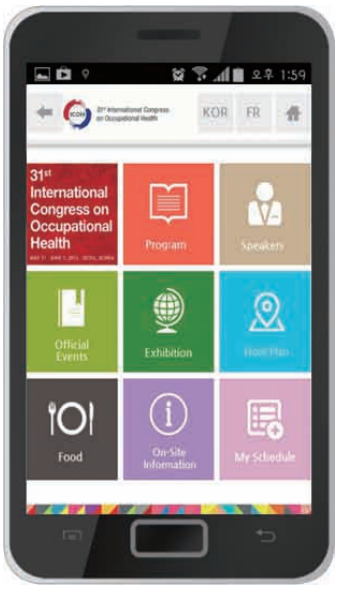


Figure 3. Mobile ICOH Congress 2015

Résumé en français

Message du Président

Chers collègues membres de la CIST

Les activités de la CIST au cours de la période triennale 2012-2014 a été très productives. En traitant des sujets urgents en matière de santé au travail, le lien entre les Comités Scientifiques a été renforcé. Tous nos secrétaires nationaux et régionaux et les membres du Conseil ont fait des efforts conjoints afin d'améliorer la visibilité de la CIST y compris la campagne des membres et nous avons aussi révisé le Code d'éthique. Dans tous les aspects de notre travail, nous avons renforcé la coopération avec nos alliés internationaux.

Ces progrès se reflètent dans la préparation du Congrès CIST 2015 à Séoul. Le débat au Congrès évidemment contribuera à évaluer les résultats de cette période triennale. Par ailleurs, nous pouvons aussi renforcer notre effort conjoint à travers le réseau CIST.

Le nouveau développement est basé sur l'action collective vers les objectifs bien définis. Parmi les buts les plus importants que nous partageons, je voudrais parler du progrès et du besoin d'action dans ces trois objectifs: (a) promouvoir les processus proactifs qui sont localement ajustés, (b) faciliter le travail d'équipe des parties prenantes, et (c) respecter les principes éthiques dans notre travail.

Promouvoir les processus localement proactifs

Un des développements les plus remarquables dans nos activités actuelles est le progrès des processus compréhensifs et proactifs de la gestion des risques, qui est souvent vu dans les différentes situations de l'emploi. Les mesures compréhensives permettant de faire face aux risques liés au travail à multiples facettes sont essentielles. Par exemple, la construction de la culture des lieux de travail qui peut prévenir de nombreux risques, y compris les risques psychosociaux pour les travailleurs âgés et les jeunes, la préparation aux urgences et aux risques émergents ainsi que les mesures de soutien importantes pour améliorer l'équilibre entre le travail et la vie privée.

Lors des conférences et des colloques scientifiques organisés par les Comités Scientifiques, j'ai toujours été impressionné par des progrès concrets dans la formulation des procédures globales et proactives visant aux risques complexes. Ce progrès a été informé lors de la conférence conjointe des Comités Scientifiques à Sao Paulo en 2013 et aux réunions des autres Comités Scientifiques. Au Symposium sur la protection de la santé des travailleurs nanomatériaux organisé en février 2015 par la Comité Scientifique sur la santé des travailleurs nanomatériaux, le besoin du guide préventif sur les procédures dans le traitement des risques émergents a été particulièrement souligné. De nombreuses études d'intervention rapportées dans les réunions mettent l'accent sur les procédures proactives envers les divers changements de vie au travail nécessaires afin de prévenir les maladies professionnelles.

Ces rapports récents mettent aussi en lumière l'importance d'ajuster le processus proactif aux situations locales pour gérer efficacement de plusieurs risques. En assurant la gestion durable des risques, le processus localement ajusté traitant les risques étendus avec l'attention à la guide préventive devrait être la clé pour le planning des actions préventives qui peuvent réduire de divers risques.

Ce progrès dans le développement des processus localement proactifs et efficients est aussi important pour l'extension des services efficaces de santé au travail dans les petites entreprises qui font face à de nombreuses contraintes sociales et techniques. Le thème du Congrès CIST 2015 est «l'harmonie globale» dans la gestion des risques de différents secteurs et lieux de travail ayant des contraintes similaires. Nous pouvons s'efforcer de réaliser ce but en encourageant le planning des actions significatives dans chaque contexte local.

Faciliter le travail d'équipe des parties prenantes

Un autre objectif important que nous partageons est le développement des moyens pratiques qui peuvent faciliter le travail d'équipe des parties prenantes responsables à la promotion des lieux de travail sains. Comme les discussions lors de nos réunions, ce développement est essentiel pour élargir les services fondamentaux et efficaces de santé au travail.

Les études d'initiatives des lieux de travail sains pour améliorer les conditions de travail liées à la maladie professionnelle révèlent le rôle clair du travail d'équipe incluant les travailleurs, les managers et les agences locales avec le soutien des services de santé au travail et des activités collaboratives dans les milieux de soins primaires. Comme les rapports de ces études, les deux types typiques des initiatives de travail d'équipe traitant de nombreux risques liés au travail attirent nos attentions.

Premièrement, le travail d'équipe axé sur l'action pour le changement des pratiques aux lieux de travail a un impact réel quand les parties prenantes participent aux étapes de la planification et de la mise en œuvre de la modification des conditions de travail. Ce travail d'équipe est bien connu comme le cycle «Plan-Do-Check-Act» entrepris conjointement au niveau du lieu de travail. Comme les moyens pratiques qui facilitent ce travail d'équipe, les expériences récentes confirment l'inutilité des procédures simples de la planification et de la mise en œuvre des améliorations réelles dans le cycle PDCA. Il est important d'appliquer des procédures localement faisables en utilisant des boîtes à outils axés sur l'action pour évaluer et contrôler les risques.

Deuxièmement, le travail d'équipe des travailleurs, des managers et des formateurs multidisciplinaires dans les approches participatives qui est en train de se développer dans de nombreux pays est aussi typique. Ces approches se concentrent sur des procédures simples pour conduire le changement localement faisable. Cela permet de faciliter la planification et la mise en œuvre des améliorations avec le travail d'équipe de la population locale et les services de soutien. Ces progrès reflètent les principes de base de l'hygiène et de l'ergonomie au travail et conduisent donc à un impact réel aux lieux de travail.

Les exemples du développement de ces deux directions dans le travail d'équipe sont rapportés dans le rapport triennal qui sera distribué lors du Congrès CIST 2015. A partir des expériences récentes des collègues de la CIST dans les équipes d'intervention d'Ebola en Afrique de l'Ouest, nous apprenons également que la facilitation du travail d'équipe au sein de chaque équipe est essentiel pour la planification des procédures préventives de la santé au travail et pour la mise en œuvre de la formation d'action participative. Ces exemples montrent l'applicabilité étendue d'une stratégie progressive basée sur le travail d'équipe des populations locales pour obtenir un impact réel.

Renforcer le partenariat éthique

Les bonnes pratiques en santé au travail ont besoin des services compétents des spécialistes qui peuvent efficacement soutenir le travail d'équipe des parties prenantes. Dans ce contexte, la version révisée du Code d'éthique de la CIST 2014 mentionne, dans son nouvel article, la nécessité de promouvoir l'éthique organisationnelle. Cet article souligne que les institutions et les organisations employant les professionnels de la santé au travail devraient adopter le programme d'éthique organisationnelle aligné avec les principes du Code d'éthique. C'est en ligne avec les nouvelles dispositions qui disent les contrats d'emploi devraient décrire les rôles de la consultation et mentionner l'indépendance professionnelle des spécialistes en santé au travail.

Il est nécessaire de promouvoir une coopération étroite entre tous les partenaires internationaux et nationaux pour assurer la conduite éthique des deux organisations soutenues par des équipes de santé au travail et des professionnels individuels de santé au travail.

A la fin de mon mandat présidentiel pendant six ans, je tiens à exprimer mes plus sincères remerciements à tous les membres de la CIST pour leur précieuse contribution au travail de la CIST au cours de la période triennale. Grâce à la poursuite des progrès dans notre travail, nous pouvons développer notre engagement qui permet l'impact sur la protection et la promotion de la santé des travailleurs dans le monde entier.

J'attends avec impatience de vous voir au Congrès CIST 2015 à Séoul.

Kazutaka Kogi
Président de la CIST

Résumé en français

De l'éditeur

Contenu de ce numéro

L'infection par le virus Ebola des travailleurs des soins de santé (HCW) est le type typique de maladies liées au travail. Pour ces travailleurs, le taux d'incidence de l'infection par le virus Ebola est 100 fois plus élevé par rapport à la population générale. C'est principalement à cause de l'insuffisance des installations de soins de santé, de la mauvaise utilisation des équipements de protection individuelle (EPI), ainsi que de sa forte infectiosité. Le Comité Scientifique sur les travailleurs des soins de santé a rapporté l'importance de la protection ces travailleurs contre les maladies infectieuses hautement contagieuses, qui peuvent tourner à l'infection par le virus Ebola dans l'avenir. L'Institut national de la sécurité et de la santé aux Etats-Unis (US NIOSH) fournit les informations sur les EPI des travailleurs des soins de santé afin de protéger l'infection à virus Ebola. Le Comité Scientifique sur la toxicologie des métaux (SCTM) a perdu un excellent membre en janvier, Dr. Maths Berlin. Il était un brillant toxicologue dans la recherche sur la toxicité des métaux, notamment celle du mercure. Il a aussi contribué toute sa vie à la société de la CIST. Nous le rappelons comme un collègue memorable de la CIST. Ce Comité a publié la 4ème édition du livret sur la toxicologie des métaux et de nombreux scientifiques de la CIST y ont participé. Les membres de la CIST peuvent profiter de 30 % de réduction jusqu'à la fin d'août.

Lieu du Congrès CIST 2021

Le vote sur le lieu du Congrès CIST 2021 aura lieu pendant le Congrès 2015 à Séoul. Les trois pays candidats (Australie, Inde et Maroc) participent au processus d'appel d'offres. Les membres actifs de la CIST décideront le pays au cours du Congrès. Le résultat sera annoncé le jeudi 4 juin après-midi. Vous pouvez voir les informations sur les pays candidats dans le bulletin d'informations et le site Web de la CIST.

Mise à jour du Congrès CIST 2015

Le Congrès CIST 2015 à Séoul s'approche. Vous êtes maintenant en train de lire cette newsletter au Congrès si vous ne la recevez pas avant votre départ pour Séoul. Depuis le Congrès 2009, l'Agence Coréenne pour la Sécurité et la Santé au Travail (KOSHA) prépare le Congrès en collaboration avec la Société Coréenne de Médecine Professionnelle et Environnementale (KSOEM) avec le soutien du Ministre de l'Emploi et du Travail (MOEL).

Dans le Congrès CIST 2015, bien sûr il y aura des programmes tels que les sessions plénières et semi-plénières des excellents experts dans le domaine de la santé au travail comme les précédents Congrès. De plus, le Congrès CIST 2015 à Séoul organisera certains événements spéciaux par rapport aux Congrès précédents. Au Congrès CIST 2015, le forum politique aura lieu le mardi en substituant la session semi-plénière. Les participants au forum pourront obtenir les points de vue sur l'avenir de la santé au travail des fonctionnaires de haut niveau gouvernementaux, internationaux et académiques. Ils peuvent également apprendre la perspective sur la recherche grâce aux directeurs des instituts nationaux ou gouvernementaux au mardi et au jeudi après-midi.

Les participants peuvent aussi étudier la santé et la sécurité au travail en Asie grâce aux deux conférences internationales parallèles. La 25ème Conférence Conjointe Corée-Chine-Japon sur la Santé au Travail qui se tiendra au mercredi vous permet de voir l'état actuel de la santé au travail en Asie de l'Est. La 30ème Conférence annuelle d'APOSHO vous donnera l'occasion de voir la stratégie de la prévention des blessures ainsi que de la santé des travailleurs dans la région Asie-Pacifique. Il y aura également les sessions spéciales, orales et posters comme d'habitude.

Au mardi soir, les congressistes peuvent participer aux activités sociales ainsi qu'à la réception de bienvenue. Ils peuvent apprendre la culture coréenne en marchant la cour du temple coréen s'appelle Bongeunsa sous le clair de lune. Ils sont aussi invités au dîner de gala au jeudi soir. Je suis convaincu que ces événements peuvent laisser un très bon souvenir à tous.

Publication de la Newsletter

Depuis ma prise en charge de la publication de la newsletter en 2009, 16 éditions ont été publiées au cours des

deux termes de service (2009-2014). Les newsletters ont été publiées trois fois par an dans le premier terme, mais la 2ème édition était liée avec la 3ème dans la dernière période triennale. Je souhaite que le bulletin d'informations soit à l'heure dans la période triennale à venir.

La newsletter vise à offrir les informations sur les membres et leurs activités par le biais des communautés de la CIST, telles que les Comités Scientifiques (SC), les rencontres nationales et les réunions régionales. Elle couvre le message d'un président, de l'éditeur, les articles spéciaux pour les sujets brûlants, les rapports des Comités Scientifiques sur les conférences internationales, les rapports des Secrétaires Nationaux sur les activités nationales et régionales des membres, les questions administratives de la CIST, les informations sur la publication, les réunions scientifiques à venir, les informations sur les présidents et les secrétaires de SC, et toutes les informations relatives aux membres.

Chaque question permet de fournir de nouvelles informations dans le domaine professionnel sous le titre d'un sujet d'actualité y compris l'infection de la grippe H1N1, le système général harmonisé (GHS) sur la santé au travail, la nanotechnologie, les maladies infectieuses au travail, le travail posté et la santé, le Control Banding, l'exposition aux radiations par l'accident de Fukushima, les problèmes de santé au travail dans les pays en développement d'Asie, le guide éthique pour les professionnels de santé au travail, les maladies cardiovasculaires liées au travail, les soins d'urgence aux lieux de travail, l'évaluation de l'invalidité, les critères de diagnostic de l'ASEAN sur les maladies professionnelles, et l'infection à virus Ebola. Je crois que ces sujets pourraient offrir un aperçu complet sur la santé au travail des membres.

La newsletter a été distribuée aux membres de la CIST inscrits dans la première année de la période triennale. Cependant la distribution a été limitée aux membres actifs, qui ont payé leur cotisation pour le reste de la période triennale. Les bulletins d'informations publiés ont été envoyés par e-mail d'abord et ceux imprimés ont été envoyé par courrier.

Remerciement

En terminant mon devoir en tant que rédacteur en chef pendant les deux périodes triennales, je voudrais remercier tous les membres pour leur intérêt dans la newsletter. Mon mandat en tant que membre du conseil de la CIST se termine aussi. Je souhaite que le bulletin d'informations puisse être le moyen de communication entre les membres. Je tiens à exprimer ma gratitude à toutes les personnes qui ont soumis leurs articles précieux, aux présidents et secrétaires des Comités Scientifiques qui ont rapporté les conférences et les activités, aux Secrétaires Nationaux qui ont présenté les activités de santé au travail dans chaque pays et régions, et aux membres de rédaction qui ont examiné la version provisoire. Je voudrais remercier en particulier le prof. Michelle Riva (Université de Milan) qui a en permanence soumis des articles sous le titre de «Santé au travail dans les beaux-arts, la musique et la littérature», Suvi Lehitinen (Institut finlandais de la santé au travail) et Mary Ross (Afrique du Sud) qui toujours corrigent les mots et les phrases, et le professeur Louis Patry (Université du Québec) qui révise la version française.

Enfin, je voudrais apprécier mes collègues de KOSHA, qui font le travail éditorial y compris la rédaction de la version anglaise et française et envoient ces newsletters aux membres par la poste et en ligne.

J'espère vous voir au Congrès CIST 2015.

Seong-Kyu Kang
Rédacteur en chef
Bulletin d'informations de la CIST
Conseil de la CIST

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Aging and Work
Chair : Clas-Håkan Nygård
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