

# Clean, Safe and Healthy Environment: From Home to Workplace

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### Abstract

Occupational and environmental health related problems are found in every workstation and country. Still the budget allocation for prevention and control of such diseases is poor. Simple measures such as cleanliness, personal protection can be adopted by all workers and employers can ensure its implementation. In a series of organizing conferences and workshops for last 5 years, seven preconference workshops and an international conference with theme of clean, safe and healthy environment-from home to workplace was organized in 2016 with the objective of increasing the skills among occupational health professionals. More than 129 research papers were presented by the young scholars and doctors. Proceedings of the conference and workshops have been given in the present article.

**Keywords:** Asbestos, Air quality, Disaster management, Ergonomics, Occupational injuries, Radiation

### Introduction

The 3rd International Conference on Occupational & Environmental Health was held during 23<sup>rd</sup>-25<sup>th</sup> September 2016 at National Institute of Health and Family Welfare (NIHFW), New Delhi (Ministry of Health & Family Welfare, Govt. of India). This third consecutive conference was organized by Department of Community Medicine-Vardhman Mahavir Medical College & Safdarjang Hospital, National Institute of Health and Family Welfare (NIHFW) and, OHS-MCS New Delhi.

This conference witnessed the presence of more than 450 delegates from all over the country and overseas. The faculty and participants from overseas countries like South Africa, Australia, Norway, USA, Hong Kong, Malaysia, Japan, South Korea, Thailand, Iran, Nigeria etc. graced the event.

The Conference was inaugurated by **Director General Health Services, Ministry of Health and Welfare, Government of India, as Chief Guest of** the conference. The theme of the conference **Clean, Safe and Healthy Environment: From Home to Workplace** has the inspiration from contemporary themes of Govt. of India, "**Clean India and Make in India**". The conference attracted 34 invited speeches, and 129 papers (90 oral presentations and 39 poster presentations).

Dr. Jayanta Kumar Das, Director, NIHFW, The Chair of the Organizing Committee of ICOEH 2016 welcomed all the delegates, guests, dignitaries and was overwhelmed by the response received from all over the globe.

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The Chief Guest, Prof. (Dr.) Jagdish Prasad, Director General Health Services, Govt. of India, inaugurated the conference by lighting the lamp. He comprehended the issues of occupational and environmental health, climate change and needed delivery of health care to the vulnerable population. He assured all his support for upgrading the occupational and environmental health discipline in the country.

The distinguished guest of the function, Dr. Barry Kistnasamy, Compensation Commissioner, South Africa while delivering his keynote address, gave a comprehensive overview of the "Framework for Occupational Health" covering macro-environment for occupational health, policy and legislation, organisation and management, delivery of Occupational Health Services, human resources, technology and infrastructure, surveillance for occupational diseases and injuries, monitoring and evaluation, social protection including compensation for occupational diseases and injuries, and resource mobilisation and financing of occupational health services thereby emphasising on multi-disciplinary approach to achieve the requite goals.

The souvenir of the conference was released by the chief guest. At the end, Dr. Ashish Mittal, the organizing secretary of the conference proposed the vote of thanks to the dignitaries, distinguished guests, guests from overseas and delegates, support staff, and service provider for a wonderful program. The inaugural function was followed by the cultural program having different flavours of singing, classical and western dances and mime act. The day ended with a dinner at the cafeteria of NIHFW.

This conference strengthened the bond, commitment and continuous patronage of the prestigious institutions / associations of international repute such as International Commission on Occupational Health (ICOH), Italy; Oslo University, Norway; National Institute of Disaster Management (NIDM), New Delhi; Centre for Inquiry (CIF), India; In the Service Of Mankind (ITSOM), India; IAPSM, Indian Public Health Association (IPHA), Indian Association for Adolescent Health (IAAH), IHMSR, Jamia Hamdard, New Delhi; St. Stephen Hospital, New Delhi.

The sponsorships from the apex scientific bodies such as Indian Council of Medical Research (ICMR), Department of Science & Technology (DST), and Council of Scientific & Industrial Research (CSIR) were there to boost the morale of organizing committee.

Six scholarships were given in the form of waiver of the registration fee to the best papers chosen by Scientific Committee. The best papers from each session, oral as well as poster sessions, were given the best paper certificates.

### Series of Pre-Conference Workshops

Following the tradition of previous two conferences (ICOEH 2013 & 2014), this conference was also preceded by Series of Pre-Conference Workshops on  $21^{st}$  and  $22^{nd}$  September 2016 and a special workshop during the conference on  $24^{th}$  September.

However the series of workshop started in February 2016, whereby two workshops were organized at Vardhman Mahavir Medical College and Safdarjang Hospital, New Delhi.

The first workshop "Training Program on Preparedness & Medical Management of Radiation Emergencies" in collaboration with Narora Atomic Power Station Hospital, Narora, UttarPradesh was organized on 01-02 February, 2016 at Vardhman Mahavir Medical College and Safdarjang Hospital (VMMC & SJH). Dr. R. Deolalikar, Certifying Surgeon from Narora Atomic Power Station, was the chief coordinator of the workshop. 59 participants from various institutions [Vardhman Mahavir Medical College and Safdarjang Hospital (VMMC & SJH); National Centre for Disease Control (NCDC), New Delhi; Post Graduate Institute of Medical Sciences (PGIMS), Rohtak, Haryana full batch of 20 students of Associate fellow in Industrial Health (AFIH) from Regional Labour Institute (RLI), Faridabad, Occupational Health Physicians from various Industries] were given demonstration to handle and decontaminate the radiation exposure.

The second workshop National Training Program on "Disaster and Climate Resilient Public Health System: Risk Analysis, Planning and Crisis Management" in collaboration with National Institute of Disaster Management, New Delhi was organized during 03-05 February, 2016 at Vardhman Mahavir Medical College and Safdarjang Hospital (VMMC & SJH). Dr. Anil K. Gupta, Associate Professor & Head Policy Planning Division, National Institute of Disaster Management (NIDM), New Delhi was the chief coordinator of the workshop.

64 participants from various institutions [Vardhman Mahavir Medical College and Safdarjang Hospital (VMMC & SJH); National Centre for Disease Control (NCDC), New Delhi; Post Graduate Institute of Medical Sciences (PGIMS), Rohtak, Haryana; MLBMC, Jhansi, MM Nursing Institute, Mullana; Jamia Millia Islamia, New Delhi, NDMC & Hindu Rao Hospital, New Delhi], full batch of 20 students of Associate fellow in Industrial Health (AFIH) from Regional Labour Institute (RLI), Faridabad, Occupational Health Physicians from various Industries] were given insight into various environmental health issues associated with disasters and climate change and how to plan and prepare for tackling the issues effectively by the eminent faculty over the 3 days.

Workshop on "How do We Achieve Healthy Workplaces in SMEs?" was held on 21<sup>st</sup> September, 2016. This workshop was co-sponsored by ICOH (International Commission on Occupational Health, through its Scientific Committee Italy) on Occupational Health in Small Scale Enterprises and Informal Sectors (SCOHSSEIS). Mr. Mahinda Seneviratne, Secretary of SCOHSSEIS was the Chief Facilitator of this workshop. This workshop was attended by 53 participants from academic institutions, industry, civil societies from all over India.

The dynamic faculties for the workshop were Mahinda Seneviratne (Australia), Inakshi Naik (South Africa), Tor Danielsen (Norway), Sanjeev Pandita (Hong Kong), Robin Nicholas (USA), Somnath Gangopadhyay (Kolkata, India) engaged the participants for the whole day.

Workshop on "Building capability to deliver basic occupational health to informal sector workers" was held on 22 September, 2016 at NIHFW, New Delhi. Mr. Mahinda Seneviratne from Australia, Secretary of the Scientific Committee on Occupational Health in Small Scale Enterprises and Informal Sectors (SCOHSSEIS), ICOH, was the Chief Facilitator of this workshop. He was supported by the eminent national and International faculties consists of Inakshi Naik (South Africa), Tor Danielsen (Norway), Sanjeev Pandita (Hong Kong), Robin Nicholas (USA), Somnath Gangopadhyay (Kolkata, India), Tanu Anand & Mohit Gupta from New Delhi, India, and included ICOH members as well as three SCOHSSEIS executives.

The workshop was attended by 48 participants including public health specialists, community health programmers, SME owners, NGOs, medical students and researchers from academic institutions, Industry, Civil societies, trade unions from all over India. The objective of the workshop was to build capacity of the participants to enable them to deliver basic occupational health services (BOHS) to informal sector workers in India and to debate how BOHS could be integrated with public health programs. Mahinda Seneviratne, Secretary, SCOHSSEIS, summarized both the workshops, as follows.

There is a village of "silicosis widows" in the agate gem polishing industry in northern India but simple changes to work practices and modification of tools could have prevented the deadly exposures of those workers to silica. This was a poignant observation by Sanjeev Pandita from the Indian network of occupational health NGOs in opening the ICOH cosponsored capability building workshops for OHS in SME and Informal Sectors.

With over 80 million workers in 37 million SMEs across India and more than 90% of its workforce recognised as informal, India has a daunting task in addressing the challenges not only of the high disease & illness burden from work-related exposures but also the associated long-term harm from environmental pollution. The need for regulating these work environments and making the unrecognised and marginalised workers more visible was seen as a major step that must be urgently taken to address these mounting problems.

Through a locally produced video of sewage workers, SCOHSSEIS executive committee member Dr Ashish

Mittal, a practicing occupational physician in Delhi, illustrated the deadly impact of methane and other toxic gases in the confined work spaces of these vulnerable workers. Participants then discussed and identified measures that can design out the problem, as well as decent jobs with more workers that can reduce workloads and prevent the high fatalities in this dirty & dangerous occupation.

Another SCOHSSEIS ex-co-member Dr Somnath Gangopadhyay Professor of Ergonomics at Calcutta University gave enthralling presentations on identifying and addressing ergonomic hazards in various SMEs and informal sector work tasks. His examples of changes made by workers through participatory assessments and training showed how costs were reduced and production improved in a number of small industries.

Dr Tanu Anand, Assistant Professor of Community Medicine, NDMC& Hindu Rao Hospital, New Delhi, was joined by Dr Tor Danielson, Occupational Medicine specialist from Norway in a practical session on using simple tools available at primary health care settings to diagnose possible occupation-related disease. Basic Occupational Health Services (BOHS) to all is a WHO/ILO/ICOH priority and improving capability for its delivery is a key component of SCOHSSES work plan for the 2015-18 triennium. Dr Tanu gave an insight to the unique problems in delivering BOHS for informal workers in India and drew attention to a world-wide problem that is largely ignored-the highly hazardous work done by migrant workers and the local xenophobia that often denies them basic access to health services.

Last but not least, Mr Robin Nichols an ICOH member and an expert on OHS communication from Santa Fe, California, addressed a key link between success or failure of any program: the need for relevant and effective communication and gave some useful tips for the participants to take home and apply in their various fields of practice.

Ms Inakshi Naik, former Head of Training at the South African National Institute of Occupational Health (NIOH) summed up the two intensive days of workshops and its camaraderie by noting that the enthusiasm particularly of the young, female health professionals and their insightful problem solving was an inspiration for further work. Ms Ina felt that the immense challenges faced by India in OEH will be in capable, competent hands.

Five recommendations from round-table discussions at the end of each workshop were presented to the ICOEH Conference closing plenary for further action. These included:

- Better, modernized regulations and an effective labour inspectorate
- Greater attention to incident reporting and early diagnosis with focus on prevention rather than battling for compensation
- Consultation with the marginalized and vulnerable is crucial and a need to build a multidisciplinary coalition to lobby, support and take actions on delivering BOHS for informal workers



Delivering BOHS for Informal Sector Workers workshop participants with teaching faculty

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Dr Tanu explains the key steps of BOHS



Dr Tor mentors a welding hazards exercise



Over 90% of the Indian workforce

Workshop on "Research Methods in Occupational & Environmental health" was held on 21-22 September, 2016 and was co-sponsored by Community Medicine Updates, VMMC, New Delhi.

Dr. Jugal Kishore, Professor & Head Community Medicine, VMMC, New Delhi was the chief coordinator of the workshop. The faculties for the workshop were Dr. Tor Erik (Norway); Dr. R Kamath (Manipal); Dr. A K Sood, Dr. Sanjay Gupta, Dr. T Bir, Dr. JP Shivdasani, Dr. Mainak, Dr. Amit (NIHFW); Dr. S S Waghe (CLI, Mumbai); Dr. Neelam Roy, Dr. Shailja, Dr. Geeta Pardeshi (VMMC); Dr. Shekher Grover (ICMR); Ms. Shalini Tripathi (ADR).

This workshop was attended by 67 delegates from various institution of academic interest (NIHFW, RML, GMC Bhopal, BRD Gorakhpur, SMC Meerut, Stanley Medical Collage, GSVM Kanpur) from all over India. The workshop was designed to help the delegates in better decision making, in choosing the right methodology, hand on training on calculation of sample size, simple statistical tests, and interpretation of results with opportunity for practical exercises.

Posure to silica is a common occupational are informal workers health hazard

Workshop on "Indoor Air Quality (IAQ)" was held on 22 September 2016 in collaboration with Ministry of Health, Federal Government of Malaysia. The chief faculties for this workshop were Dr. Lim Jac Fang, Medical Officer of Health, Malaysia & Dr Nelbon Giloi also from Malaysia. This one day workshop was attended by 19 participants to gain understanding on issues related to IAQ. The workshop trained them with basic strategies, principles and practices in Indoor Air Quality aspect and practical applications used in IAQ monitoring.

# Workshop on "Elimination of Asbestos related diseases in India"

As part of International Conference on Occupational and Environment Health, consultation was organized by OEHNI, ANROEV and AMRC jointly at New Delhi on 24 September, 2016. The meeting was attended by 22 delegates, representatives from S. Africa, USA, Japan, Hong Kong, S. Korea and India. The group included victims, workers, trade union representatives, academicians, experts, bureaucrats, medicos and voluntary sector.





Jangannarth Butale worked in Hindustan Ferrodo unit in Mumbai owned by Turner and Newall, which manufactured asbestos textile. He worked there for 28 years as helper on Weigh Bridge. Only after working for 10-12 years that he was given PPE. They used to handle raw asbestos with bare hands. He said that they were poorly paid workers. He used to earn Rs 4500/- in 2001!

They were not given any information on asbestos hazards and no PPEs were supplied. As a result of exposure to asbestos at work he got asbestosis. Due to secondary exposure his wife and son also got asbestosis. He demanded to ban all forms of asbestos as soon as possible.



Mr. Darshan Parekh, who is in the business of packing is promoting asbestos free products, though his firm established by his father 45 years ago, was supplying asbestos packing. He informed the audience that a gasket factory in Paithan in Maharashtra would pay Rs. 4 lakh as compensation to the asbestos victims of their factory and make them sign on "some" papers which workers do not know. He further informed that asbestos is imported in India for manufacturing gaskets, insulation and brake lining. It is used by industry and not poor people. Industry prefers asbestos cloth, lagging, gaskets, gland packing because they are cheaper. He talked of several Indian Standard like IS 11451 (OSH exposure to asbestos), IS 11769 (Asbestos cloth, rope, mill board, gasket etc), and IS 12081 (pictorial warning and labelling).

He said those who opt for ISO certification cannot use asbestos products. Sugar industry uses maximum asbestos ropes and gaskets. Now, there are 5 manufacturers in India who have come forward to manufacture asbestos free products and they are planning to form association. He said that asbestos fibres cost Rs. 450 /- per kilo but asbestos cloth costs Rs. 1250/- per meter. While in case of asbestos free material, material costs Rs. 1,000/- per kg but the cloth manufactured from it costs Rs. 600-950 per meter. Asbestos is light weight so they sell its cloth on meter to earn huge profit. He said that there is huge chain between end user and the manufacturer.

Barry Kitsnasamy, Director of Workmen Compensation, South Africa, gave interesting presentation on their work to reach out to the victims of silicosis, former miners, to pay them the compensation. He described how after he took over as Director, reorganized his department and created electronic data of 9,90,400 silicosis patients identified in 2 years. 50% of them have died. The electronic data that they compiled has name of the patient, name of the mine, name of his village etc. He said that in last 30 years 1,08,883 cases of TB were reported among mine workers. 50 years ago it was established that dust exposure reduces immunity and as a result they got infected to TB. Hence primarily dust exposure was responsible for their TB and hence TB among miners is compensable. 24,052 workers suffering from silicosis have been paid compensation while 8,993 are yet to be paid. They have raised 200 million dollar fund from mining industry for compensation. Wealth of the mining industry is 2 trillion dollar. They have mines of gold, diamond, platinum and gas deposits. Huge amount of work was done and then they set out to organize camps in far flung areas to identify those who were on their list. In 2003 they fought legal case in UK against the mine owners of Cape Blue Asbestos to won 40 million dollars as compensation. S. Africa has a 1912 law which provided to monitor retired mine workers also but due to apartheid it was not enforced. It was partially enforced only for white workers. He further said that mine workers are exposed to multiple risks that compound their TB infection. They have two times risk of getting TB than general population while they run 3 times risk of getting HIV than general population. Before August, 2015 in Pneumoconiosis Board less than 300 cases were settled per month but after he took over they settle 2000 cases in a month. They had only two doctors at work before but after he took over he appointed 24 doctors. The patients who have PFT less than 40% of predicted value, are considered to be first degree and they are paid \$2,000 while those who have more than 40% reduction in PFT against predicted are considered second degree and they are paid \$5,000 towards compensation.



Sugio Furuya said that in 6 countries they have legal provision to pay compensation for asbestos related diseases for occupational as well as environmental exposures. Under this scheme they pay minimum and later one can go to the court to claim for higher amount. In case of environmental exposure the amount of compensation is less than the occupational. But amount is paid without wasting much time. Large population applies for it and they all get it. Retired workers suffering from ARDs are not considered for occupational but they are considered under environmental category. Trade Unions do not help retired workers to claim compensation for occupational exposure. Trade unions are not interested.

Ye Yong explained degree of risk of asbestos while collecting samples. He explained how risk is air > dust > soil > bulk. Raw material ceiling, roof, goods unknown are examples of bulk. He talked of the sample collection methods and the precaution to be taken. He demonstrated the suit to put up for the person collecting the samples. He also talked of the results of the samples collected from India. He said that 29 samples were collected from abandoned mines in south Rajasthan. Out of that in 28 they found tremolite asbestos. 6 samples were positive drawn from dumpsite in Madhya Pradesh. He was enthusiastic in training Indian activists in sample collection and suggested to hold 4 Skype call conferences in a month. Kamal Tewari and his colleague Rajkumar, workers from Asbestos factory in Kolkata also spoke.

Rana Sengupta gave his suggestions for multi stake holder campaign as 1) Give lectures at the events of medical doctors 2) Collect ARD prevalence data from TB hospital in Rajasthan mine areas to verify the occupational history of the TB patients. Those having occupational history of asbestos exposure at work should go for medical examination again to confirm ARD 3) SHRC has final hearing on NIOH role, which is being perused by them 4) Case may be filed against NIOH for compensation in tort 5) Trace the supply 6) In 6 districts of Rajasthan they had asbestos mines. They have worked in one district and plan to work in other districts.

Mohit Gupta said that in Jhadol in Rajasthan 700 mine workers have been identified. Out of them 200 have gone to the Silicosis Board. 60 have been confirmed by the Board. Some of them will soon get the compensation. By next year they plan to identify all the mine workers. But Asbestos factories in Rajasthan will have to be followed up. Dr. Abhijeet Jadhav advocated for scientific advocacy. He suggested to use science, politics and masses for advocacy. He was of the opinion that Indian group is weak in all three. He suggested that we should approach MPs and MLAs and talk to them about the science. Social media may be used to create awareness among masses. Activists working on manual scavenging used successfully social media, he said. Tweet and re-tweet can take message to long distances. These issues should be projected as human right issues and not as OH issues. We should establish something like Forum for development for inclusive growth etc. He emphatically said that to succeed we all will have to give our time.

#### **Scientific Sessions**

The three days conference spanned from 23rd-25th September 2016, was divided into 7 scientific sessions (34 invited speakers), 12 oral paper presentation sessions (90 papers) and 5 poster paper presentation sessions (36 papers).



The First day of the conference started with the registration of the delegates at 8:00 am.





### International and National Policy and Legislations for Clean and Safe Workplace Environment

This session was chaired by Dr Shiv Lal, former Special DGHS and Dr. Muzaffar Ahmad, former member National Disaster Management Authority. The speakers of the session were Dr. S S Waghe, Deputy Director (Medical), Central Labour Institute, Mumbai; Dr. Onkar Sharma, Regional Labour Commissioner, Ministry of Labour, Govt of India, New Delhi; Mr. Harinath, Supreme Court Lawyer, New Delhi; and Dr. K V Girish, Rail Wheel Factory, Bangalore. The

Rapporteurs for the session were Dr. Charu, Senior Resident, MAMC & Dr. Kundan S Rathore, Junior Resident, and VMMC.

### Strategic Management for Sustainable Healthy Workplace Environment (Air, Water, Waste, Chemical, Energy)

This scientific session was chaired by Dr. Meena Kakeri, Professor & Head, Community Medicine Grants Medical College, Mumbai and Dr. MR Surwade, CEO Humatrix, New Delhi. The Rapporteurs for the session were Dr. Sunil K Singh, Senior Resident, VMMC, and Dr. Sarubh Basu (MAMC).



Picture: Dr. R Kamath is speaking while Dr. Thomas H Gassert, Innakshi are other speakers and Dr. Meena Kakeri, Dr. MR Surwade chairing the session

First speaker Dr. Thomas H Gassert, from University of Massachusetts Medical School, Boston, USA addressed the audience on "Occupational & Environmental Health-Best Practices". He discussed about a case of occupational asthma and contended that good occupational and environmental health is a human right. He detailed about the obstacles to OEH rights and how to prevent occupational hazards by following three levels of prevention. He also discussed about the OEH medical training structure, barefoot epidemiology and how to construct OEH diagnosis and causation. At the end he discussed about protecting co-workers from occupational hazards through appropriate knowledge and skill retention.

Second speaker was Ms. Inakshi Naik, former Training Head, National Institute of Occupational Health, South Africa, who spoke on "Global Harmonization system (GHS)-A New Approach to Chemical Hazard Communication" and classification of chemicals and their toxicity and effects. She also discussed about the guidelines for ensuring the safe production, transport, handling, use, and disposal of chemicals. She recommended that there should be a uniform labelling of chemicals in different countries and also compared the GHS implementation stages between India and South Africa. At the end she also recommended that there should be a communication training to prevent chemical hazards.

Last speaker Dr. R Kamath, Professor, Community Medicine, Madikeri near Mangalore, discussed occupational hazard in cashew nut workers. He told that harmful chemicals 'anacardium' acid and 'cardol' are present in cashew nut which are irritant leading to contact dermatitis, erythema, hyperpigmentation of hands among the workers. At the end he recommended measures to prevent this occupational hazard.

At the end of session questions were raised by audience about the latent period of contact dermatitis and how to prevent contact dermatitis. Compensation issues for the workers were also discussed. Doctors from the audience gave their valuable comments about changes to be made in policy making for workers in different sectors so as to provide a clean and healthy occupational environment.

# Elimination of Asbestos Related Diseases in India

This plenary session chaired by Dr. U Datta, Dean, NIHFW, New Delhi & Dr Geeta Pardeshi, Professor, VMMC & SJH, New Delhi.

**Mr. Sugio** from Japan spoke about the scenario of **Asbestos Related Disease (ARDs) in Asia**. He quoted asbestos as 'Silent Time Bomb' and proven carcinogen. ISSA imposed a worldwide ban on asbestos in 2006. It is an occupational as well as public hazard- domestic, neighbourhood and environmental. It has been established that majority of mesothelioma is due to asbestos exposure. 200,000 deaths in 2013 has been attributed to asbestos.

Mesothelioma deaths attributed to asbestos is low in India relative to world, which is criticised for poor monitoring. The general trend of asbestos usage is increasing in Asia. So far, worldwide, 50 countries have banned asbestos in various forms and utilities. Japan, Korea, Nepal and Hong Kong are the Asian countries where asbestos is banned.



**Mr. Gopal Krishna** gave his speech about 'Asbestos Usages and Diseases in India'. He criticised the inconsistencies between various departments in India regarding asbestos, mainly labour, chemical and environment. The compensation is not properly given to the victims. He insisted that the buildings associated with asbestos must be registered and the register should be maintained. Shockingly, no building in India is asbestos free. Liabilities must be fixed on the industries to compensate workers and victims of ARDs and a fund must be established for the same. He regretted that the local & rules have not been updated to date and international standards. The organisations must be held criminally liable for any mishaps due to asbestos.

Mr. Yeyong Choi from South Korea presented an overall picture on the 'Asbestos Related Diseases in South Korea' and about South Korea's journey in achieving the feet of 'Asbestos-Free Country' in Asia. South Korea has covered ARDs under occupational insurance since 1980s. He made a revelation that environmental asbestos exposure is 20-30 times larger than occupational. 50% of the asbestosis is due to abandoned mines. He mentioned about the geographical divisions made in South Korea according to the risk potential of asbestosis. Reconstruction industries are a major risk and hazard. In the end of his speech, a case study of 71 family members near an asbestos mine was discussed.

Dr. Sanjeev Pandita, Ex Director AMRC, Hong Kong, spoke about the prevalence of 'Indian Resistance to Listing Asbestosis in COP-Going Against Science and Logic'. He introduced an asbestos victim /survivor from Mumbai. He elaborated about the Rotterdam Convention, which was convened to discuss and decide on the shared responsibilities between states in the International trade of hazardous materials, to provide information and transparency in regard to the materials and chemicals traded. Asbestos was listed among the chemicals. Over the course of time, India has taken opposite stands contradicting its own earlier stands. He criticised India' opposition in 2015 COP, for the inclusion of chrysotile in the list. He concluded by pointing out that asbestosis causes huge human and economic cost to the society.

At the end of the session, delegates asked their queries regarding the policy framework in discussion to tackle the asbestosis in India and the role of health sector in planning and managing ARDs, which was clarified by the speakers and chair persons.

The Rapporteurs for the session were Dr. Jagveer Singh, JR (NIHFW), and Dr. Arvind Gandhi JR (VMMC).

### **Occupational Accidents and Injuries**

This session was chaired by Dr. Neeta Kumar, Scientist, ICMR. The Rapporteurs for the session were Dr. Avijit Das, JR VMMC, and Dr. Vijay Shankar Patel (NIHFW).

The first presenter Dr. Shubhanshu Gupta presented the paper on "In depth analysis of pattern of occupational injuries and utilization of safety measures among workers of railway wagon repair workshop in Jhansi (U.P.)". The second presenter Dr. Deepak B Sharma deliberated on "Epidemiological correlates of well being at work place and other occupational aspects (hazards, injuries, accidents and diseases) amongst saw mill workers in Anand, Gujarat". Dr. Satpinder Jit was the third speaker on the paper "Occupational hazards and health problems in microenterprise workers in an urban slum in Delhi, India". Dr. Faheem Ahmed, the fourth speaker spoke on "An epidemiological study of occupational health hazards faced by flour mill workers in Delhi". The fifth slot was for Dr. Satya Ranjan Patra on "Study of grievous injuries suffered by workers on site in Andaman and Nicobar Group of islands". The Mr. Praveen Dubey presented the paper on "Analysis of cases of fall injuries and suggestions for controlling losses" at sixth place. Dr. Simmi Rattan, the seventh speaker of the session made the presentation on "Occupational hazards of OT workers and surgeon". The last speaker was Dr. Charu Kohli on "Strengthening of standard precautions practice and biomedical waste management at a New Delhi Municipal Corporation dispensary in New Delhi".

#### **Occupational Diseases**

Scientific session on Occupational diseases was chaired by Dr. Anubha Mandal, Professor DCE, New Delhi and Dr. Rambha Pathak Prof & Head, HIMSR, New Delhi. The Rapporteurs for the session were Dr. Pragyan (VMMC) & Dr. Manisha Sagar (NIHFW).

The first presenter Samreen Khan deliberated on "Occupational health of brassware industry workers in Moradabad, India: A community based case-control study". The second presenter Dr. Gurmeet Kaur presented the paper on "Morbidity profile of workers in scissors manufacturing industries in Meerut, UP". Dr. Gopal Krishna the third speaker spoke on "Status of enviro-occupational health of workers in hazardous industries: An inquiry into asbestos industry ".

Dr. Nidhi Prasad was the fourth speaker on "Occupation health profile of workers involved in manufacturing industries and related challenges". Dr. Adhirath Mandal presented the paper on "Occupational hazards of workers in small-scale welding shops in Delhi-A case study" at fifth place. The sixth slot was for Dr. Vipul Yadav on "Oral health status of biscuit and textile industrial workers of Delhi city- A comparative study". The last speaker was Dr. Puja Paul on "Assessment of health status of autorickshaw drivers in Gurgaon".

### Ergonomics and Occupational Health Problems

This session was chaired by Dr. Joyce Felicia Vaghela, HOD, Community Health, St Stephan Hospital, New Delhi and Dr. Ragini Sahay, Associate Professor, Sociology, Galgotias Educational Institutions, Noida. The Rapporteurs for the session were Dr. Vinay Kumar (NIHFW) and Dr. Shristi (VMMC). Five presenters out of seven were present in this session. First presenter was Dr. Vivek Varat Pattanaik who presented the title "Knowledge, perception and practices of private owned drivers in a tertiary medical college of India-A cross sectional study." Second presenter was Dr.Lipilekha Patanaik who presented the title "Self- reported morbidities among software professionals-A cross- sectional study." Third presentation was by Dr. G. Jahanvion "Unmasking the health problems faced by the police personnel's." Fourth presentation done by Dr. Amala Sankar Chatterjee was on "Backache in dumper operators of a private iron ore mine in Eastern India-A cross sectional study."

Fifth presenter was Dr.Anunay Gour who presented the title "Occupational hazards posed to labourers and operators at landfill sites." Dr. Amala Sankar Chatterjee was the winner of the session. The presenters were given certificates of participation. The chairs were felicitated by Dr. Jugal Kishore, Professor and Head, Department of Community Medicine, VMMC and Safdarjang Hospital at the end of the session.

#### **Occupational & Environment Health**

Poster session was chaired by Dr. MR Surwade and Dr. Abhay Singh, Assistant Professor, Community Medicine, Kanpur. The Rapporteurs for the session were Dr. Sushil Kumar Vimal, VMMC and Dr. Amrita, VMMC.

The posters in this session were displayed by Dr. Abhay Anand on "Outdoor PM 2.5 and black carbon exposure assessment in urban slums in India", Dr. Swati Sharma "Analyzing the role of proteomic biomarkers in cancer due to exposure of lonizing radiation", Dr. Nitin Chauhan "Sustainable green solutions for vector control in Indoor environments", Dr. Vaishali Bhole "Implications of household air pollution in India on health : An overview", Dr. Prem Sagar Panda on "Assessment of level of satisfaction of patients attending OPD Of radiotherapy department Of Dr. BRAM Hospital, Raipur", Dr. Bhavna Jain "Prevalence Of mental distress and addiction habits among medical under graduates", Dr. Sunil Babu Mekale on "Occupation matters: A study on construction work labourers in India", Dr. Debashish Chowdhury on "Migration and vulnerability: A case for early intervention at the place of work, India", Dr. Sunil Babu Mekale on "Addressing occupational health of migrants through targeted intervention: Experience from National AIDS Control Program".

### **OH of Health Workers**

This session was chaired by Dr. Anil K Gupta, Associate Professor, National Institute of Disaster Management, New Delhi and Dr. Tor. The Rapporteurs for the session were Dr. Mukesh (VMMC) and Dr. Nitesh Chauhan (VMMC).

The first slot was for Dr. Ehsan Rafeemanesh from Iran on "A survey on occupational low back pain and its risk factors in steel industry workers in Iran". The second presenter Dr. Subraham Pany presented the paper on "Burn out phenomenon among physicians and its relationship with stress and sleep pattern". Dr. Tanu Anand presented the paper on "Job satisfaction among medical officers in Delhi" at third place. Dr. Shekhar Grover was the fourth speaker on "Prevalence and risk factors of low back pain (LBP) among dental undergraduate students". The fifth presenter Dr. Neetu presented the paper on "Comparison of Levels of Burnout among Health Care Professional students in Delhi". The last paper presenter was Dr. Gurmeet Kaur on "Self-rated assessment of conflict at work amongst staff nurses of a tertiary care hospital in Delhi".

# Hazardous Waste and Biomedical Waste Management

This session was chaired by Dr. G Jahnavi, Professor ANIMS, Andoman Nicobar and Dr. Manish Chaturvedi, Professor, Community Medicine, Sharda Medical College, Greater Noida. The Rapporteurs for the session were Dr. Dileepan (VMMC) & Dr. Anita Yadav (NIHFW).

Dr. Sumitra Pattanaik presented the first paper on "Awareness and practice of health care personnel involved in handling of biomedical waste: A study in a tertiary care hospital of Bhubaneswar". Dr. Surabhi Sethi was the second speaker on the paper "A Cross Sectional study on the knowledge and practices of biomedical waste management and occupational hazards among waste handlers in a tertiary care hospital of Delhi". The third paper was for Dr. Somen Kumar Pradhan on "A descriptive study on evaluation of bio-medical waste management in public healthcare facilities in Raipur district, Chhattisgarh".

Dr. Archana Thakur presented the paper "E waste-Management practices in India" at fourth place. The fifth paper was present by Dr. Sneha Kumari on "Awareness regarding e-waste management among medical undergraduates of a tertiary care hospital in New Delhi". The sixth presenter Dr. Piyush kumar Gupta presented the paper on "Effectiveness of training on knowledge, attitude, behaviour and practices of health care workers regarding universal precautions and biomedical waste management in Ashray Medical Centre, Kritinagar, New Delhi". The last paper presenter was Dr. Sharma Sangeeta Jain on "Knowledge, attitude and practice of biomedical waste management in tertiary care hospital in Muzaffarnagar."

# Chemical & Radiation Exposure and Water Pollution

This session was chaired by Dr. SV Singh, Director Professor, Community Medicine (MAMC) and Dr. Geetu Singh, Assistant Professor, SN Medical College Agra. The Rapporteurs for the session were Dr. Vinay Kumar (NIHFW) and Dr. Vandana Pandit (VMMC). Dr. Arpan Patra was the first speaker on the paper "Physical and chemical characterization of fine aerosol under different urban driving conditions in Mumbai, India". The second presenter was Dr. Vishwas Singhal on "Environmental exposures in urban slums: Characterization of drinking water contaminants". The third paper presented by Dr. Vaishali Bhole on "Status and trends in provision of safe drinking water and sanitation in India: Evidence from census".

The fourth slot was for Dr. Madhu Anand on "Maternal environmental exposure to Hexachlorcyclohexane (HCH) and its Effects on Birth Size". Dr. U. Venkatesh presented the fifth paper on" Study on current community access to and practices on water, sanitation and hygiene in selected villages of Chargawa block, Gorakhpur, Uttar Pradesh, India". Dr. Swati Sharma, the last speaker spoke on "A mataanalysis of occupational cancer due to exposure to Ionizing radiation (IR) and new therapies".



### **Occupational Health of Healthcare Workers**

This scientific session was chaired by Dr. Simmi Ratan, Professor, Paediatric Surgeon (MAMC) and Dr. Nidhi Bhatnagar, Army College of Medical Science, New Delhi. The Rapporteurs for the session were Dr. Sanjay Kumar JR (NIHFW) and Dr. Manila Sharma JR (VMMC).



The posters in this session were displayed by Dr. Sandeepon "Knowledge, attitude and practices regarding standard Precautions among health workers in a rural block of Haryana", Dr. Anuradha Davey on "Predicator of the determinants for the combination of psychological manifestation due to occupational stress among the staff nurse: A cross sectional Study", Dr. Rashmi Mehra "Stressing on strain reduction: Posturedontics", Mohd. Nadeem "Knowledge and awareness regarding needlestick injuries among healthcare workers in tertiary care hospital in Greater Noida", Dr. Piyush kumar Guptaon "Effectiveness of training on knowledge, attitude, behaviour and practices of healthcare workers regarding universal precautions and biomedical waste management in Ashray Medical Centre, Kritinagar, New Delhi", Dr. Gurmeet Kaur the "Self rated assessment of stress due to physical environment and job requirements among staff nurses of tertiary care hospital in Delhi", Dr. Nitika Sharma on "Study to assess the knowledge, attitude and practices of biomedical waste management among healthcare personnel at a tertiary care hospital in Haryana".

### Injuries, Infection Control and Waste Management

This session was chaired by Dr. Shalini Smanla, Assistant Professor, Community Medicine, VMMC and Dr. Ramesh Chand, Assistant Professor, NIHFW. The Rapporteurs for the session were Dr. Sushil Kumar Vimal (NIHFW) and Dr. Vandana Pandit (VMMC). The posters in this session were displayed by Dr. Bharat Paul "Needle stick injury among nursing staff of a tertiary care hospital in Haryana", Dr. Amrita Singh "A cross sectional study on prevalence of needle stick injury and its management among waste handlers in a tertiary care hospital of Delhi", Dr. Sahil Goyal "Needlestick Injuries among healthcare workers in a tertiary care hospital of Haryana", Dr. Pradeep Chaudharv "Evaluation of biological waste management practices in multispecialty tertiary hospital", Dr. Sandeep Kumar "Occupational health of waste management worker-An overview", Dr. "Saurav Basu "What do we know about hand hygiene in Indian healthcare settings? A narrative literature review", Dr. Anuj Jangra "Knowledge and practice regarding hepatitis B infection among nursing students of Rohtak, Haryana", Dr. Pensri Anantagulnathi from Thailand "Development of safety guidelines for the healthy, safety, and happy workplace project".

### Occupational & Environmental Impacts on ENT

The Fourth Plenary (Scientific Session IV), a special comprehensive session on ENT was chaired by Dr. A K Agarwal, Former Dean, MAMC and Dr. A K Rai, Medical Superintendent, VMMC & Safdarjang Hospital, New Delhi. The Rapporteurs of the session were Dr. Rameshwar JR (NIHFW), Dr. Suruchi Mishra (VMMC).



Dr N.N Mathur, Principal, VMMC spoke about "Noise induced hearing loss". He briefly discussed about the three types of noise induced hearing loss that is socio accusis, ONIHL and Acoustic. Further the factors like intensity, temporal pattern, spectral pattern, duration and length of exposure which determine the outcome were discussed in brief. He discussed about the audiogram and its dip at 4000Khz. He recommended hearing conservation program implementation at work by employers, fine for non compliance of noise level, exceeding the recommended duration, non monitoring of hearing and not using protection devices. He thus stressed that prevention is the best way against noise induced hearing loss.

Dr. Gautam Bir, Professor ENT, gave his speech about "Occupational nasal and laryngeal aliments". He shared that 50 percent ailments come under nose and 10 percent are laryngeal ailment. Occupational allergic rhinitis could lead to nasal blockage, sneezing and nasal discharge and some low molecular weight agents could lead to non immune sensitization. Treatment for this also is avoidance of the allergens. Occupational laryngeal ailments like work related irritable larynx syndrome whose diagnosis can be made by taking history and fibre optic technology were discussed.

At the end of the session, Dr. A K Aggarwal summarised the whole session and delegates asked their queries regarding the policy framework in discussion to tackle the occupational and environmental impact on E N T which was clarified by the speakers and chair persons.

### Methods for Stakeholder Involvement (Governments and Public Agencies, Civil Societies, Academic Institutions.)

The Fifth Plenary (Scientific Session V) session was chaired by Dr. Gadpayle A, Director, PGIMER, RML hospital and Dr. Suneela Garg, Director Professor & Head, Community Medicine, MAMC, New Delhi. The Rapporteurs for the session were Dr. Rajeev Ranjan JR (NIHFW) and Dr. Anirudh Saxena JR (VMMC).



Speakers : Dr. Tor Erik, HOD Occupational Medicine, Norway "Work life in Norway" Mr. Mahinda, Australia "Improving our working in leaving environment through OEH Services", Mr. Prashant Rajankar, Toxics Link, New Delhi "Lead health hazards: Need to be regulated", Dr. Madan Gopal, Coordinator- National Migration Unit, National AIDS Control Organisation, New Delhi-"Benefits of engaging in Corporate Social (CSR)", Dr. V Responsibilities N Srivastava-"Organizational Development Institute and occupational health".

Mahinda, in his paper proposes that OEH professionals, policy makers and researchers must take new approaches to apply their skills and knowledge in delivering OEH services to the informal sector. Opportunities through effective legislation, sustainable capability building and collaborating to deliver basic OEH services were discussed. Promising examples from different countries were presented to illustrate how OEH services can be improved in India and the sub-continental region.

# Inculcating Behavior Change-Toward Workplace Safety

The Sixth Plenary (Scientific Session VI) session was chaired by Dr. U C Ojha, Director Occupational Health, Basai Darapur, ESI Hospital, New Delhi and Dr. (Brig) Atul Kotwal, Professor, Community Medicine, Army College of Medical Science, New Delhi. The Rapporteurs for the session were Dr. Umang, JR VMMC, Dr. Ruchir JR MAMC. The chair persons welcomed the speakers to the august audience and introduced the theme of the session to the participants present.

Mr. Robin Nicholas from Nicholas Communications, USA started off this session with his speech on "Why we work", the concept of why do we work, importance of doing work, and how it can affect the health at the workplace. He explained how work can help us in experiencing, expressing and exploring one self. It helps in expressing one's identity, values, relationships, community and the culture. Behavior of a person at work depends upon motivations which can be both external as well as internal. External ones can be both positive or negative. Internal motivations are those which consist of the core values which defines a person. He concluded his presentation by focusing on the importance of understanding the fact that work can be done even by considering that the individual doing the work is human being not a machine who is paid to do a certain work.

The second speaker, Dr. Avinash De Sousa, IIOPM, Mumbai, while speaking on "Neuroscience and workplace safety-Is there a connection" laid importance on finding if there any connections between mind and workplace safety. He focused on the concept of insight to humanity which encompasses 3 major areas- theory of decision making, neural circuit of decision making and molecular control of decision making. He explained the theory of mind, social behavior and social perception and their relation to workplace safety.

Dr. U. C. Ojha, Director Occupational Health, Basai Darapur, ESI Hospital, New Delhi, the third speaker, on "Mindfulness and work related stress, sleep and industry" started his presentation by explaining the definition of mind which says " A part of a person that thinks, reasons, feels and remembers" while mindfulness is defined as quality or state of being mindful. It has a lot of benefits that includes both others as well as psychological benefits in the form of decreased depression and anxiety and increased attention skills. He explained the concept and its importance by giving a number of cases and studies where results have shown stress, anxiety and depression were reduced significantly.

Mr. Ashok Agarwal, writer from New Delhi talked on "Mindfulness Living" explaining mindfulness and the correlation of mind with body in accordance with the future time. He said that passing time can be equated with the flow of water, once passed it will not come back to you, and we should make the best out of present time rather than focusing on past and the future. He explained about the 7 attributes of mindfulness- non judging, acceptance, letting go, trust, patience, beginners mind, non-striving.

The session was then concluded by the respected chairpersons. Dr. (Brig.) Atul Kotwal, who also expressed his views on the theme of inculcating behavior change towards workplace safety. He thanked all the speakers and then felicitated them with a certificate and momento for their contribution.

# Ophthalmologic Aspects of Occupational & Environmental Health

This session was chaired by Dr. Lopa Sarkar, HoD Ophthalmology VMMC & SJH and Dr. Anuj Mehta, Professor, Ophthalmology from VMMC & SJH. The Rapporteurs were Dr. Rajneesh Mohan Siwan (NIHFW) and Dr. Suruchi Mishra (VMMC).

The speakers of the session with their respective title of presentation were Dr. Radhika Tandon, Professor, Ophthalmology, AIIMS, New Delhi "Occupational corneal affections and averting measures", Dr. CS Dhull, HOD, PGI Rohtak "Ocular injuries in farmers and their prevention", Dr. Chinmaya, Assistant Professor, Bangalore Medical College, "Occupations related ocular infections", Dr. Punita K Sodhi, Guru Nanak Eye Hospital, New Delhi, "X chrom lenses-An occupational and environmental respite for colour vision defectives", Dr. Pankaj Ranjan, Senior Medical Officer, Department of Ophthalmology, VMMC & Safdarjang Hospital, New Delhi, "Computer Vision Syndrome".

Dr. Punita K Sodhi, discussed a study done to evaluate responses of colour vision defectives with use of four different X-Chrom lenses i.e. red, orange, green and yellow, on the three color vision testing techniques of colour matching study (anomaloscope), colour confusion study (Ishihara's Charts) and colour identification study (Edridge Green Lantern). She concluded that the X-Chrom lenses appear complimentary to each other and different lenses may improve performance in different situations. Dr. Pankaj Ranjan presented that Computer Vision Syndrome (CVS) is a complex of eye and vision problems related to near work which are experienced during or related to computer use. CVS is characterized by eye strain, blurred vision, dry eye, headache, neck and shoulder pain, double vision etc. CVS can have the catastrophic effects from common work mistakes to low performance and low productivity. Ultimately, it leads to decreased quality of life and extreme discomfort to the sufferer. Various studies also documented that 50-90% the computer user suffer from any form of visual symptoms of CVS. With more and more use of computer, laptop, ereader, tablet and even smartphone, CVS is becoming a major public health problem.

# Learning from Success Stories of Changes in Workplace Environment

This session was chaired by Dr. Sanjay Gupta, prof. & head, Epidemiology, NIFHW, New Delhi & Mrs. Nirmala Singh, Principal, College of Nursing, PGIMER, Dr. RML Hospital, New Delhi. The Rapporteurs for the session were Dr. Priyanka Sharma (VMMC), Dr. Vandana Pandit (VMMC).

**Speakers:** Dr. Amod Kumar, Dr. Eram Rao-Food Biosafety and Standard, Mr. Parvinder Pal, Director Sutra, Mr. Vishal Dev, FMC, Mr. Pradeep Naraynan Director Praxis



Dr. Amod Kumar, Senior Consultant, Dept of Community Health, St Stephan Hospital, spoke about the working conditions of labourers & how it can be improved. He opined that the safety equipment used in India, made as per western standards are not apt for Indian workers. So there is a need for designing and manufacturing equipment suitable for Indian workers. A new modern helmet for welders has been made that has auto darkening function & it costs about Rs 2500. He also spoke about the new innovative "Sukun Rickshaw" that has been launched on 2<sup>nd</sup> Oct 2016. It is a hybrid rickshaw & runs on battery, solar power & man power. The total cost of production is Rs. 45000, but the rickshaw pullers have to pay 24 instalments of Rs1500 per month.

Dr. Eram S. Rao spoke on "Food Bio-safety and Standard". She mentioned about the various biological hazards (microbial contamination of food) and chemical hazards (pesticides and insecticides). She said that to control these hazards fruits and vegetables should be properly washed and cooked at right temperature (>165 degree Celsius). She also mentioned that hygiene of the workers at the markets should be good and the vegetable baskets should be clean and packaging should be up to standards. There are many things that can be done at home and at bigger levels to save the community from various hazards related to food.

Mr. Vishal Dev, Manager, FMC, New Delhi spoke about "Occupational safety of workers of micro, small and medium enterprises (MSMEs)". There are about 50 million MSMEs that are not registered. These MSME do not follow any regulation about worker safety and people working here are working with obsolete technologies. There are about 51 laws for labour legislations that should be enforced. He mentioned that there is a need to identify material issues that workers face and bring improvement in them and also re-enforce the legal provisions. Towards the end of the session few questions were asked related to food safety like-what is the best way to remove insecticides from fruits? Is it safe to wash fruits with detergents? Dr. Eramadvised to remove pesticides from fruits- by commercial ways- ozone treatment (Safal is working on it), at home- soak the fruits and vegetables in lukewarm water and for vulnerable people-it is advised to peel off the fruits and vegetables. She also said that it is not good to use detergent to wash fruits and vegetables as the alkali may stay on the vegetables and fruits and it is not good for health.

In response to the comment on the use of solar energy to improve work conditions for workers, Dr. Amod Kumar replied that most of the hand tools use little energy & if regular motors are replaced by BLDC motors a lot of energy can be saved. Government is trying to develop such tools for welding workers. There is a plan to replace all shadows with solar panels.

The question related to factory inspections and regulations, Mr. Vishal Dev replied that regular inspection is required as a lot of MSMEs are not registered and don't come under ESI act.

The entire session was very informative and interesting and it ended with felicitation of the speakers and chairs.

### **Promoting Health and Well-being at Work**

This session was chaired by Dr. O P Rajoura, Professor, Community Medicine, UCMS, New Delhi and Dr. Rajesh Kumar, Professor, Community Medicine, MAMC. The Rapporteurs for the session were Dr. Kundan, VMMC & Shristi Yadav, VMMC.

The first presenter Dr. Himanshu Gupte presented the paper on "Offering tobacco cessation service to employees in a cement manufacturing plant in Chandrapur, Maharashtra".

The second presenter Dr. Arti Gupta deliberated on "Occupation role in patient satisfaction with health facility". Dr. Shantanu Kumar Purohit was the third speaker on the paper "Influencing behaviour of Informal labourers for HIV/AIDS services in India: From evidences to actions through an integrated approach and the opportunities beyond".



Dr. Deeptesh Kadam the fourth speaker spoke on "Understanding pathways to health with legacy of caste among sanitation workers: An eco-social approach". The fifth paper was of Dr. Debashish Chowdhury on "Use of technology in segregating occupational risks of migrant and linking them with services: Experiences from National Aids Control Program for migrants". The last speaker was Dr. Sanjeev Davey on "Impact of prevention strategies on perception of clients towards occupational health hazards in a rural area of district Muzaffarnagar: A cohort study".

#### **Health issues & Miscellaneous Topics**

This session was chaired by Dr. Manju Chughani, Principal, RCN, Jamia Hamdard, New Delhi and Dr. Ravneet Kaur, Assistant Professor, CCM, AIIMS, New Delhi". The Rapporteurs for the session were Dr. Nitesh Chauhan (VMMC) and Vijay Shankar Patel (NIHFW).



Dr. Venkatashivareddy B., the first speaker, spoke on "Occupation and income effects out-of-pocket expenditures for seeking primary health care". Dr. Abhishek Agarwal presented the paper on "Study on malnutrition and its impact on scholastic performance" at second place.

The first presenter Srishti Singh presented the paper on "Self-medication: Awareness and attitude among undergraduate medical students in a Medical College, Haryana". The last speaker was Dr. Debashish Chowdhury on "Enhancing coverage and service uptake among migrants: Learning's from pilot project in India."

#### **Other Occupational Health Issues**

This session was chaired by Dr. S.K. Chumber, Senior Specialist Microbiology, Infection Control Officer, St. Stephen's Hospital, New Delhi and Dr. Tanu Anand, Assistant Professor, NDMC & HRH, New Delhi. The Rapporteurs for the session were Dr.Surabhi Sethi (VMMC) and Dr. Anita Yadav (NIHFW).



The First presenter Dr. Rashmi Agarwalla deliberated on "Awareness of occupational health hazard amongst the rag pickers of New Delhi". Dr. Praveen Chokhandre was the second speaker on the paper "Assessing burden of morbidities among waste pickers of Mumbai, India". The third slot was for Mukesh Khanna on "Practical approach to occupational health and safety during handling of high potent pharmaceuticals".

Dr. Vaishali Jaiswal the fourth speaker spoke on "Status and trends in provision of safe drinking water

and sanitation in India: Evidence from census". The fifth presenter Dr. Swati Jain presented the paper on "Reasons behind non compliance for Polio Ravivaar among residents of Modinagar, India". The sixth presenter Dr Rohit Dhaka presented "A study of knowledge, attitude and practice among health care personnel at tertiary care hospital in Rohtak, Haryana". The last speaker was Dr. Shivam Kapoor who presented on "Are left-handed clinical dental students left out? An exploratory survey on practice perspectives".

### **Mental & Adolescent Health**

This scientific poster session was chaired by Dr. Himanshu Chauhan, Assistant Professor, PGI, RML, New Delhi and Dr. Shakher Grover, Scientist (ICMR), New Delhi. The Rapporteurs for the session were Dr. Rameshwar JR (NIHFW) and Dr. Arvind Gandhi (VMMC).



Dr. Dinesh Kumar presented the poster on "Impact of mentoring on reproductive and sexual health needs of unmarried adolescents in Chandigarh (UT), India". Dr. Vivek Gupta had the poster on "Summative approach for slum adolescents". Dr. Parul Jain displayed the poster on "Study of depression, anxiety, stress and related factors among the adolescent school going children". Dr. U Venkatesh's poster was on "Impact of statistical software on attitudes toward statistics among medical students: Psychometric analysis using STATS- 28". Dr. Harshpreet Singh had a poster on "A cross sectional study to know the factors which influence the dependence of substance abuse among substance abusers in a tertiary care hospital, Haryana". Dr. Shweta Arora presented the paper on "Corporate social responsibility and health in India". Dr. Shilpa Kumari displayed the poster on "Food advertisement exposure on Indian television (TV): A risk for childhood obesity". Dr. Nayana Sharma had a poster on "Organic farming: Issues, problems and need of the day". Dr. Sana Siddiqui had a poster on "Impact of alcohol use on the family members in rural Muzaffarnagar".

### Other Miscellaneous Occupational and Environmental Issues

This session was chaired by Dr. Puspanjali Swain, CMO, Tata Chemicals, Dr. JP Shivdasani, (NIHFW). The Rapporteurs for the session were Dr. Pragyan (VMMC) & Dr. Manisha Sagar (NIHFW). Dr. Madhur Verma presented the poster on "Family planning and contraceptive use: The importance given to female choices during decision-making in rural India". Dr. Palak Goel had a poster on "Awareness and knowledge regarding menstrual among women in a rural area of Delhi". Dr. Neha Priya presented the poster on "Assessment of knowledge, attitude and practices related to infant and young child in working mothers of Moradabad". Dr. Geetu Singh did a poster "Awareness level about breast cancer in on workaholic environment: Findings from community based study in urban Agra, Uttar Pradesh". Dr. Punita K. Sodhi had a poster on "Comparing impact of different X-Chrom lenses on occupational efficiency of color vision defectives". Dr. Siddharudha Shivalli presented the poster on "Comprehensive malaria knowledge and treatment seeking pattern of construction site workers in a highly endemic urban area of India".

#### **Conclusion and Valedictory Function**

Dr. Saudan Singh, Vice Chancellor, HNB UME University, Uttrakhand, and Dr. R K Kataria, Medical Commissioner, ESI Corporation, New Delhi graced the closing session. Mr. Mahinda, represented the ICOH, the co-sponsor of the conference. He discussed the prominent recommendations drafted as outcome of the workshops as way forward to achieve new milestones in 'Occupational and Environmental Health'.



Dr. Sudan Singh shared his experience and vision to improve the situations of the workers, who are being neglected of their legitimate right to health and safety. He facilitated the winners of the best papers from all the oral and poster sessions of the conference with the best paper certificates, the chair of the organizing committee Dr. J K Das, Chairs of the scientific committee Dr. Jugal Kishore, Ms. Inakshi Naik, the organizing secretaries Dr. Sanjay Gupta and Dr. Ashish Mittal.



Dr. R. K. Katari asummed up the role played by ESIC towards betterment of occupational health in India through the clinical services to the industrial patients, and training of ESIC doctors in occupational health. He

encouraged all the Rapporteurs of all the sessions and the backdrop support staff with a conference memento.





Group photo of the conference participants