practices and experiences. It is important to develop systems that allow us to forecast and document these changes and enable us to implement appropriate actions to respond and adapt appropriately to these changes, learning from past experiences. It will also be highlighted that it is important to promote comprehensive approaches that address not only potential negative impacts but also positive outcomes and synergistic effects across several policy and organizational interventions.

9 OCCUPATIONAL HEALTH ASPECTS OF EMERGING INFECTIONS – SARS OUTBREAK AFFECTING HEALTHCARE WORKERS

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Introduction The risk of occupationally acquired infections among healthcare workers (HCWs) has been recognized for hundreds of years. Examples include HCWs managing patients with infections and infestations ranging from tuberculosis to scabies. In the past two decades, HCWs have faced an escalated threat of deadly emerging infections such as Severe Acute Respiratory Syndrome (SARS), Avian Influenza, Middle East Respiratory Syndrome (MERS) and Ebola.

Methods This presentation will cover first-hand experiences gained during the SARS outbreak in 2003 in Singapore. A survey of 15,025 HCWs was conducted in Singapore during the outbreak, to study perceptions of the risk of SARS infection and work-related as well as non-work related problems faced by HCWs as a result of the outbreak.

Results Worldwide, over 8,422 cases and 916 deaths were reported from 29 countries, and HCWs comprised 21% of cases. In Singapore, HCWs managed 238 cases of SARS and accounted for about 40% of the cases. A total of 10,511 HCWs in Singapore (70%) responded to the survey. There was fear of the deadly disease and HCWs faced both work as well as non-work related problems as a result of SARS outbreak.

Discussion Among the insights gained during the SARS outbreak were the following:

1. SARS was a grim reminder that health care work can be hazardous;
2. the effects of SARS extended beyond the infection, to impact colleagues and families of HCWs;
3. General principles for prevention and infection control were effective against SARS; and
4. SARS posed both a public health and an occupational health threat.

Given these perspectives gained and lessons learnt, we should hopefully be better prepared when faced with similar scenarios in the future.

21 UNDERSTANDING ADMINISTRATIVE REGULATION ON OCCUPATIONAL HEALTH IN CHINA

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Introduction With the explosive economic growth and social development, China has caught the worldwide attention. Under such high speedy industrialization, more international professionals start to pay close attention to occupational management system. This article tries to give some information in this aspect.

Methods The laws, regulations and standards related to occupational health in China were collected in the official websites, specifically at web of National Health and Family Planning Commission (NHFPC, the former Ministry of Health, www.nhfpc.gov.cn) and the web of State Administration on Work Safety (SAWS, www.chinasafety.gov.cn). The major contents of these laws or regulations and current practices were introduced.

Results The two important laws in China are the Law on Prevention and Control of Occupational Diseases and the Work Safety Law, in which the responsibility of employer, employee, the governmental agencies, the authorized occupational health service agency and other stakeholder have been described. NHFPC and SAWS, jointly with other related Departments, issued two important classified catalogues, namely, the Catalogue of Occupational Hazards; and the Classification and Catalogue of Occupational Diseases. Except for ensuring the safety and health workplaces, more work on both working environment monitoring/evaluation and health surveillance are required for employers. NHFPC and SAWS have issued a series of regulations and standards to ensure these work are properly implement. However, the occupational health problem in China seems still serious, not all enterprises did follow the requirements and the level of occupational hazards at some workplaces was not compliant with OELs, even the working environment is very poor in small-scale industries.

Conclusion The Chinese government should take great effect to enforce the employers to observe the laws and regulations. There is needed improvement of the Integrity and the systematicness of occupational health management system, while the economic is growing and governmental administrative structure and function is reforming.

Accident Prevention

1718 ACCIDENT PREVENTION IN PRACTICE OR RISK MANAGEMENT?

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Aim of special session An Eclectic mix of interesting, topical subjects in the world of accident prevention.

1718a PLAYSTATION TO WORKSTATION – HOW WILL THE INTENSIVE TECHNOLOGY USE OF OUR CHILDREN AFFECT THEM WHEN THEY ENTER THE WORKFORCE?

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10.1136/oemed-2018-ICOHabstracts.43

Introduction The use of electronic devices (smartphones, tablets, laptops etc.) amongst the younger generation in particular has exploded in recent years. Studies estimate 92% of teenagers go online daily and 24% describe themselves as constantly connected. Their habits, the addictive nature of technology, the advice they receive and equipment/furniture they're provided often means they use this technology for long periods in awkward postures. What effect musculoskeletal and psychosocial effects is this having during developmental stages that may then affect these generations for the rest of their lives?

Methods With the negative effects of technology use being cumulative, taking a long time to develop into diagnosable conditions, we aim to continue this research over a number of years. For the first round we will select students from Primary and Secondary education with the aim of revisiting our sample group every three years (harmonising with future ICOH Congresses) to re-evaluate their health and wellbeing in that instant and over time. At each interval the study will include a physical examination and a questionnaire on technology usage habits, general physical and psychosocial health and any symptoms attributable to technology use.

Result We will present the results of the first year study at ICOH2018 so this is currently a hypothesis. We believe that compared with previous generations the increasing habitual widespread use of technology during childhood may have a significant detrimental impact on future MSD's, employee productivity and absenteeism rates.

Discussion Based on our hypothesis we believe this will create a need to establish new ergonomic working methods and develop new equipment and furniture to help mitigate the effects of this behaviour. This will fall into two areas; preventative measures for children at home and in the classroom and remedial actions for employers inheriting the conditions their new employees bring into the workplace.

1718b DIS 45001, HEALTH AND SAFETY IN THE MAKING (DEVELOPING INTERNATIONAL HEALTH AND SAFETY STANDARDS)

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Introduction It took over 30 years to gain enough support to produce a truly global OH and S management system standard, despite conservative estimates of 250 million occupational accidents and 160 million occupational diseases each year – worldwide over a million work-related fatalities every year. It took four years of work involving experts from 63 countries and 9 international organisations (including the International Labour Organisation and the International Trades Union Congress) to produce a draft 88% of those involved can support.

Methods The standard has been developed through a consensus-based process including 10 physical meetings (involving up to 100 people in countries spanning four continents), electronic meetings and teleconferences. Each formal iteration of the standard has been balloted, with a minimum of 75% approval needed to progress to the next stage and every comment submitted on each draft considered.

Result The standard is likely to publish at the end of 2017 or early in 2018 and is intended to replace the current widely used OHSAS 18001 standard, which was developed by a

smaller number of countries before an agreement was made for a full ISO (International Organisation of Standardisation)

Discussion To what extent can standardisation help improve OH and S performance across the world? What are the barriers to use and limitations? How can we promote proactive OH and S management, particularly in relation to health and wellbeing?

1718c AEROTOXIC SYNDROME: A NEW OCCUPATIONAL DISEASE? (ADVERSE HEALTH EFFECTS EXPERIENCED BY AIRCREW EXPOSED TO AIRCRAFT CONTAMINATED AIR)

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Introduction Since the 1950s pressurised aircraft cabin air has been drawn unfiltered from turbine jet engines as 'bleed air'. Therefore emissions from engine oil seals leads to contamination of the breathable cabin air. The synthetic oils include a wide range of hazardous substances including the organophosphates, and a complex pyrolysed mixture. Oil seals are reported to produce a noticeable cabin fume event in 1% of flights.¹ However, to function oil seals 'weep' lubricant at varying stages of normal engine operation,² so there is always low level air contamination which crew and frequent flyers are cumulatively exposed to for 100 s of hours annually. Reports of adverse effects specifically related to the aircraft environment have continued since the early 1950s.^{3,4} Short and long-term effects, termed 'Aerotoxic Syndrome', primarily involve irritant, sensitising, neurological, neuropsychological, respiratory, cardiovascular and other general effects.⁴

Methods A review of the various actions undertaken by the aviation manufacturer's, airlines regulators, governments and independent studies will be outlined. A selection of incident and accident reports and bureau of air safety recommendations will be highlighted. The implications for both aircrew, frequent flyers and susceptible individuals will be discussed.

Result The aviation industry has inadequately addressed this long-standing problem, despite it being a clear threat to flight safety, occupational health and safety, occupational and public health. There is a need for further research to be undertaken to help address this important problem relevant to anyone who flies in aircraft as crew or as a passenger.

Discussion In view of the need to prevent incidents and accidents related to aircraft contaminated air supplies and the subsequent occupational and public health issues, there is a clear need for action to be taken to assess the scale of the problem and highlight the need for preventative actions.

1686 SPECIAL SESSION ON TRAFFIC MEDICINE – AM I SAFE TO DRIVE?

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Aim Explore Medical aspects of Fitness to drive and Safety implications

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