1761 TOTAL WORKER HEALTH

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As defined by the U.S. National Institute for Occupational Safety and Health, Total Worker Health[®] is defined as policies, programs, and practices that integrate protection from work-related safety and health hazards with promotion of injury and illness prevention efforts to advance worker well-being.

Traditional occupational safety and health protection programs have and continue to focus efforts on ensuring that work is safe and that workers are protected from work-related hazards and working conditions that arise from work itself. The Total Worker Health (TWH) approach seeks to improve worker well-being for the benefit of workers and employers by protecting safety and enhancing health and productivity. As evidenced in research, work-related hazards and unhealthy work environments can contribute to or aggravate health problems experienced by workers such as, sleep disorders, stress, depression, and cardiovascular conditions.

The TWH approach integrates workplace interventions that protect worker safety and health with activities that advance the overall well-being of workers through the establishment and implementation of policies, programs, and practice. This includes, for example, addressing hazard prevention and control, work organisation and environmental supports, effective leadership, changing work and worker communities, fair and supportive policies, and worker advocacy.

1760 CLIMATE VARIABILITY IMPACTS ON OCCUPATIONAL HEALTH – RESEARCH EVIDENCE AND FUTURE STEPS

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Introduction High-heat exposures at workplaces have particularly increasing adverse occupational health consequences across the globe, which will be an increasing problem as climate change progresses. Working people with moderate or heavy work intensity in hot environments are at particular risk especially in middle- and low-income tropical and subtropical regions, where protective workplace policies/optimal controls are not in place. This lecture presents evidence on occupational heat stress in the context of climate change, reviews the current global status, and reflects on the health implications, presents an overview of the outcomes and the very important next steps.

Methods Epidemiological evidence from author's seasonal studies with workers engaged in moderate to heavy labour in ~35 Indian workplaces collected over a 8 year period on occupational heat exposures ($n \sim 3500$), self-reported heat-related health symptoms/productivity losses and physiological data ($n \sim 2000$) were analysed to understand the level and extent of heat stress impacts.

Results A significant number of workers (~82%) had heat exposures higher than the recommended WBGT (Avg. WBGT of $28.7^\circ\text{C} \pm 3.1^\circ\text{C}$). Workers exposed to chronic high-heat had significant higher odds of adverse-health outcomes (OR=2.43,

95% CI: 1.88 to 3.13, $p\text{-value} \leq 0.0001$) and productivity losses (OR=1.79, 95% CI: 1.32 to 2.4, $p\text{-value} = 0.0002$). Above normal sweat rates, urinary specific gravities, rise in Core Body Temperature and moderate dehydration were common, with compromised renal health prevalence high among exposed workers in certain occupations. Climate Projections show that future temperature rise to impose additional health and productivity risks for workers, especially in hot seasons.

Conclusion Current workplace exposure standards must be revisited and optimised for tropical settings and be consistent with the approach of protecting workers against adverse effects to health. In-depth research investigations on health implications of heat stress are an urgent need. Though reducing workplace heat stress by interventions has multiple benefits, adaptation and mitigation measures including policy changes are imperative to tackle heat stress at workplaces in the Climate Change future.

Semi – Plenary Sessions

1744 NOVEL DELIVERY MODELS FOR OCCUPATIONAL HEALTH: RESPONDING TO THE HEALTHCARE WORKER SHORTAGE

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As healthcare becomes a recognised human right across the globe, there is a commensurate demand for healthcare workers in all fields, including occupational health. However, current models of healthcare delivery are not scalable to meet the need, either in terms of funding or availability of healthcare workers. In this semi-plenary presentation, we will confront the problem and explore existing and potential solutions to meet that need, particularly the preventive services, surveillance, diagnostics, and treatment afforded to the working population in all countries and cultures.

843 EMERGING PSYCHOSOCIAL WORK HAZARDS AND EVOLVING POLICY ACTIONS: EXPERIENCES OF TAIWAN AND OTHER EAST ASIAN COUNTRIES

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Psychosocial work hazards including prolonged working hours, heavy workloads, irregular work shifts, workplace bullying and violence, precarious employment and income insecurity have been emerging occupational health concerns worldwide. These issues appear to be significant in the East Asian region, where long working hours are commonplace and extreme cases of stress-related events such as sudden deaths, cardiac attacks and severe mental disorders including depression and suicide have plagued the workplace. In the first part of the talk, I will briefly review the development of work stress as a major policy concern in this region, and summarize epidemiologic findings concerning the prevalence, social distribution and trends of major psychosocial work hazards as well as their safety and health consequences