

Introduction Total knee arthroplasty (TKA) is increasingly being performed among working patients suffering from knee osteoarthritis. As the retirement age is rising and more workers are being overweight or obese, a further increase is expected in the upcoming decade. Unfortunately, limited disorder-specific evidence is available for clinicians to support these patients in return to work (RTW). This semi-plenary provides an interactive overview, using quiz-questions, of what we know now and how to guide these workers to secure a timely and sustainable RTW.

Methods Questions that will be addressed are: how many patients do RTW after TKA?, which TKA patients should be referred to work-directed care?, which work-related knee-demanding activities improve most after TKA?, what do workers expect from TKA before surgery?, do orthopaedic surgeons and occupational physicians provide the same answers regarding prognosis for RTW?, and what kind of vocational rehabilitation is effective for RTW?.

Result Two quiz-questions are already answered.

First, based on a systematic review, 71%–83% of TKA patients in working age returned to work: so 2 to 3 out of 10 did not. The average time varied from 8 to 12 weeks although large differences were noted. Second, the Work, Osteoarthritis or joint-Replacement Questionnaire (WORQ) was used to assess the self-perceived difficulty performing 13 work-related knee demanding activities like kneeling, lifting, and working with hands below knee height. Patients who benefitted most from TKA are those whose work involved operating a vehicle or who have a job which requires periods of standing or walking on level ground.

Discussion In the upcoming decade, more TKA patients will have to RTW after surgery, and expect sound advice and guidance from their physician. Given the limited evidence available and the large group of workers involved, effective interventions to secure a timely and sustainable RTW should be developed.

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UTILISING DIGITAL MEDIA: WHERE ARE WE NOW, WHERE ARE WE GOING AND WHY SHOULD WE CARE? THE GOOD, THE BAD AND THE REALLY UGLY

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This presentation will address the following key factors: How do we best use the new digital technology to deliver our OSH information for engagement and impact?; What techniques and strategies actually work and how do we know?; What might the future look like and how are we adapting? Digital Media is at the very heart of the Fourth Industrial Revolution, changing our approach to communication and increasing the delivery of information with exceptional speed to our audiences. Digital technology is evolving faster than organisations can adapt. It is a fate that challenges most organisations in almost every industry. Digital technology has exploded and is being continually modified especially since the new millennium. We find ourselves skyrocketing into an entirely new world of communication and information sharing. We now reach out and connect to our friends, family and co-workers virtually instantaneously with the touch of a few buttons. This new *constant connexion* has fundamentally changed the way we interact with each other and our target audiences. Because of continual digital modifications we must be agile

and alert to utilising better strategies and techniques to deliver information to improve decision making by our citizens in their working environment not only for today but also for the unforeseeable future.

This presentation using globally derived data will discuss the use of a variety of the most popular digital communication platforms from Facebook and Twitter to Wikipedia, their international effect on Search Engine Optimisation (SEO) and their potential impact for extending the global reach of our OSH health information and expanding the engagement with both health professionals and the general public. This presentation has been organised to highlight the good, and the not so good challenges we face in the advanced digitization environment.

The good:

- The promise of Increased reach of our information with minimal cost and effort;
- The opportunity for closer global collaboration of information generation;
- Easy to use digital impact and engagement measures; and
- A proven mechanism to reach the ever increasing independent work force.

The not so good:

- A lack of imagination and strategy, coupled with unpredictability and poor data quality;
- A lack of agility and insufficient encouragement towards innovation: and
- A lack of pertinent competencies and insufficient strategies to overcome consolidation by information generators whose algorithms tend to favour sensationalism over science, fabricated news over facts and are increasingly monetized ads over meaningful content.

These challenges will be addressed by a selection of case studies which highlight mechanisms and strategies to overcome transformational barriers in the digital environment.

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THE DEVELOPMENT OF A STATE-WIDE FRAMEWORK FOR THE PREVENTION AND MANAGEMENT OF WORK-RELATED MUSCULOSKELETAL DISORDERS: A WESTERN AUSTRALIAN EXPERIENCE

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Introduction In Australia, work-related musculoskeletal disorders (WMSD) is a workplace condition that has been prioritised to be addressed at state and national levels. The cost and burden associated with musculoskeletal disorders workers' compensation claims in Western Australia (WA) as a result of body stressing and slips, trips and falls is high and accounts for approximately 60% of claims. Time trends have demonstrated that on average, each WMSD claim has become more expensive and led to longer periods off work.

Preventing and managing WMSDs are complex, owing to the interaction of multiple risk factors, including workplace physical, workplace psychosocial and individual risk factors. An array of primary, secondary and tertiary prevention level interventions such as ergonomic intervention, risk management, wellness programs, early and appropriate clinical intervention and return to work rehabilitation programs have been

tested. Wide scope public health influencers exist in several forms, including education, stakeholder partnership and legislation. Collectively, the complexity of this problem indicates that public health strategies for this condition require a multidisciplinary and multifaceted approach that should be sustained over a period of time. Musculoskeletal models of care and frameworks that have been developed by multiple stakeholders at statewide levels have been shown to be of value. This talk will describe the process of developing such a framework through surveys and focus groups for the state of Western Australia.

Methods Key stakeholders for WMSDs in WA were initially identified and placed in a network database. These comprised of government agencies, employer and employee groups, special interest groups, professional bodies, key academics, industry peak bodies and the insurance sector. Surveys and focus groups were held across Western Australia over a 3 month period. The primary aim of the qualitative data collection was to gain an understanding of the views of key stakeholders in relation to the prevention and management of work-related musculoskeletal, particularly their beliefs of the risk factors, facilitators and barriers for success and their views of current policy and legislation associated with this condition.

Results Information collected demonstrated that a high proportion of key stakeholders viewed this as a significant state-wide issue. The views of key stakeholders in relation to risk factors, barriers and facilitators for the prevention and management of this condition varied across the stakeholder groups and trends could be identified within and between stakeholder groups. Results show the interconnection between these stakeholder groups and the potential value of systematic and organised information sharing and staged collaborative intervention.

Conclusion The development of a state-wide framework for WMSDs requires an understanding of the evidence behind the multifaceted interventions, and a staged and consultative approach to achieve ownership and confidence in the stakeholders and implementers of the framework.

1743 HEALTH OF WORKING CHILDREN: BEYOND WORKPLACE HAZARDS

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Introduction Globally, hundreds of millions of children younger than 18 years of age are reported to be working in dangerous jobs and worst forms of child labour with exposure to a myriad of hazards. However, in our assessment of the health and wellbeing of these children, we invariably tend to dismiss the factors that have pushed these children in the first place to work, especially in hazardous occupations. This presentation puts child labour in perspective and explores hazards beyond the workplace.

Methods A review of the relevant literature on exposures and health of working children and a reflection on my personal experience and observations of the issue of child labour in Lebanon.

Results Many papers have been published on the exposure of working children to physical, chemical, biological, safety, and psychological hazards at the workplace. There is a dearth of research in the health domain on the complexity of child labour and its social and political determinants, especially in the context of war and conflicts.

Discussion Are we realistic about our goals and targets in the journey to eliminate or control child labour? Who are our partners on this path? How do we deal with child labour in the context of refugees and conflicts?

51 GLOBAL WARMING AND OCCUPATIONAL HEAT AND HOT ENVIRONMENT STANDARD IN THAILAND

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Introduction The current occupational exposure to heat and hot environment standard of Thai law was issued in 2006. The wet bulb globe temperature (WBGT) index was defined for 3 workload levels without a work-rest regimen. To assess heat exposure according to the law, workload and WBGT is monitored for 2 hours during the hottest period of the day in summer. As has been predicted, global warming could significantly impact labour capacity and productivity in Southeast Asian countries. Thus, this study aimed to explore whether the occupational standard could protect outside workers focusing on construction workers in Thailand.

Methods This cross-sectional study included 18 medium and small construction sites and involved 90 heat acclimatised construction workers. Most wore cotton long sleeve shirts and pants. Heart rate (HR) and Aural (tympanic) temperature of the participants were recorded continuously for 2 hours. Exposure data comprised relative humidity, wind velocity and WBGT, including dry bulb, wet bulb and globe temperatures, were monitored and the participants' workloads were estimated, simultaneously with the collection of physiological and environmental data, i.e. March to June. In addition a questionnaire was used to collect data of the participants.

Result WBGT ranged from 24.35–34.18°C, and 47 participants were exposed to WBGT exceeding the standard. Average air velocity and RH were 1.11 m/s and 35.77%, respectively. The range of average core body temperature and HR for 3 levels of workload were 36.60–39.4°C, 70–97 bpm, 36.62–39.58°C, 80–126 bpm and 37.04–40.08°C, 82–127 bpm respectively. Core body temperature of 29 of 47 participants exposed to heat above the standard exceeded 38°C, among these 11 had symptoms of heat related illness. In all, 18 participants were exposed to heat below the standard but their core body temperatures were higher than 38°C.

Discussion The weather was hot and dry with occasional good air movement. However, 32% of construction workers worked in high risk conditions (WBGT above the standard). Furthermore, 18 (20%) participants worked in an environment below the standard but their body core temperatures exceeded 38°C. Thus, this group of workers was not protected by the standard.

973 HEALTHY AGEING, HEALTHY WORK: A GLOBAL PERSPECTIVE ON THE HOME CARE WORKFORCE

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Introduction By 2030 one billion people worldwide will be 65 years of age or older. While populations in industrially-