Abstracts

Methods This community based programme was conducted in BMC wards A and P-North. Eligible participants were enumerated by done to door survey and informed consent obtained. This was followed by sociodemographic and risk factor assessment and invitation for health education sessions. Screening for oral cavity cancers was conducted by trained primary health workers by Oral Visual Inspection. Screen positives were referred to Nodal Hospital.

Results 256 manual workers were enrolled amongst whom 158 (61.7%) were males and 98 (38.3%) were females. The mean age was 39.665 ± 14.028 years. 247 (96.5%) were tobacco users, 113 (44.1%) alcohol users and 247 both tobacco and alcohol users. 53 (14.1%) used smoking forms. Cigarette smoking was most common [36 (67.9%)] followed by Ganja (marijuana) [6 (11.3%), 215 (84.0%) consumed smokeless tobacco (SLT). Among 118 (54.9%) male SLT users 74 (62.7%) chewed tobacco followed by Gutka [63 (53.4%)], 97 (99.0%) enrolled women were tobacco users. 59 (60.8%) used masher and 35 (36.1%) chewed tobacco. Main reasons for initiation of tobacco were peer pressure and for time pass. All 256 participants were screened for oral cavity cancers, amongst whom 27 (10.5%) were screen positive and 23 (85.2%) oral pre-cancers were diagnosed. They are now availing treatment at nodal hospital.

Conclusions Prevalence of tobacco use is high among manual labourers. Health awareness, tobacco cessation and control programmes and oral cancer screening should be targeted for this population.

Specific occupations/Industries

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<tr>
<td>0-339 SCREENING FOR RESPIRATORY MORBIDITIES AMONG TRAFFIC POLICE PERSONNEL WORKING IN MUMBAI, INDIA</td>
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<tr>
<td>1B Shakthi Dorai, 2Gautavi Mishra, 3Sharmila Pimple, 4Vasundhara Kulkarni, 5Anil Patil, 6Anshu Punjabi, 4Pavankumar Biriris, 5Maheema Bhaskar, 6Sandeep Tandon, 7Anjali Alpan Salvi, 8Anuradha Maharu Patil. 1Research Fellow, Department of Preventive Oncology, Centre for Cancer Epidemiology (CCE), Tata Memorial Centre, Homi Bhabha National Institute (HBNI), Mumbai, India; 2Professor and Physician, Department of Preventive Oncology, Centre for Cancer Epidemiology (CCE), Tata Memorial Centre, Homi Bhabha National Institute (HBNI), Mumbai, India; 3Research Assistant (Statistics), Department of Preventive Oncology, Centre for Cancer Epidemiology (CCE), Tata Memorial Centre, Homi Bhabha National Institute (HBNI), Mumbai, India; 4Assistant Professor, Department of Pulmonary Medicine, Centre for Cancer Epidemiology (CCE), Tata Memorial Centre, Homi Bhabha National Institute (HBNI), Mumbai, India; 5Professor, Department of Pulmonary Medicine, Centre for Cancer Epidemiology (CCE), Tata Memorial Centre, Homi Bhabha National Institute (HBNI), Mumbai, India; 6Professor and Head of Department, Department of Pulmonary Medicine, Centre for Cancer Epidemiology (CCE), Tata Memorial Centre, Homi Bhabha National Institute (HBNI), Mumbai, India; 7Sr. Medical Social Worker, Department of Preventive Oncology, Centre for Cancer Epidemiology (CCE), Tata Memorial Centre, Homi Bhabha National Institute (HBNI), Mumbai, India; 8Research Counselor, Department of Preventive Oncology, Centre for Cancer Epidemiology (CCE), Tata Memorial Centre, Homi Bhabha National Institute (HBNI), Mumbai, India</td>
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<td>O-342 OCCUPATIONAL ERGONOMIC STUDY ON THE CONTROL PANEL OF WAP7 LOCOMOTIVE &amp; DESIGN INTERVENTION ON INDIAN RAILWAY</td>
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Musculoskeletal disorders

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Introduction Present study was conducted on loco pilots of WAP 7 a high-speed locomotive, that pulls superfast trains of Indian Railway. Their job is highly attentive along with performing complex and repetitive tasks to drive the train. Loco pilots respond to control panels based on external signals. Arrangement of control panel in the existing WAP 7 locomotive led accessibility issues among the pilots causing Musculoskeletal disorder (MSD) from postural stress. This study is focused on the identification of the factors responsible for the development of MSD and how design intervention could be effective.

Methods Operation-subsystem-matrix analysis was performed among 39 loco pilots while driving WAP 7 locomotive for evaluating frequency and sequence of operation of existing control panel. A modified Nordic questionnaire was performed to evaluate body discomfort. Further, anthropometric
dimensions and operation-subsystem ranking were considered for design modification. Design methods such as concept generation, selection and design development were performed for the intervention. Usability testing on laboratory condition was performed on 5 loco pilots.

Results Greater than 50% of loco pilots reported discomfort in upper back, lower back and neck regions. The control operations involving use of throttle, brake handle and foot switch had ranks 1, 2 and 3 respectively. These operations were found to majorly cause MSDs in most of the body regions, with highest percentage of reports in upper back (67%), followed by lower back (54%), neck (54%), and shoulders (49%) during the operations of brake system (p<0.001), which has high importance, having the highest matrix entries in the control systems. Usability testing on the prototype by 5 loco pilots in control laboratory condition was found to be highly effective.

Conclusion This study reveals poor ergonomic issues in the existing control panel design responsible for MSD and effectiveness of design intervention to overcome the existing problem.

Return to work/Work capability assessment

**O-36**

**RETURN TO WORK AFTER AN EPISODE OF ABSENCE DUE TO MUSCULOSKELETAL DISORDER OR INJURY**

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Introduction Musculoskeletal Disorders and Injuries (MSDI) are conditions that affect the locomotor system and are typically characterized by pain and impairment, representing the main cause of years lived with disability. MSDI are the leading cause for grant sickness social security benefit in Brazil. This study aims to analyze factors that influence return to work (RTW) among workers on sickness absence due to MSDI.

Material and Methods A longitudinal study was conducted in São Paulo city, Brazil, from 2022–2021. Participants included 216 workers requiring social security compensation due to MSDI. At baseline, participants filled questionnaires about sociodemographic, health risk behaviours, work characteristics and health conditions. They were followed for 365 days after the first day of sickness absence. A Cox regression was performed to identify factors influencing the first RTW. Results 

Conclusions Most participants were males (53.0%), married (50.7%), school education higher than 11 years (60.4%), mean age 39.5 years (sd + 10.6), BMI 27.9 kg/m² (sd + 4.9), did not smoke (85.2%), abstemious (52.5%), working less than 5 years (59.4%), morning shifts (73.2%), and underwent physiotherapy (53.9%). RTW occurred for 70.4% participants over 1-year follow up. Mean duration of absence was 192.6 days. The risk factors to remaining absent for a period longer than one year were: 40 years old and older (hazard ratio – HR 0.54; 95% confidence interval – CI 0.39–0.76) and the interaction between the perception of need for improvement in the physical and psychological domains (HR 0.67; 95% CI 0.48–0.94). These findings can contribute to discussion about disability prevention and interventions to assure health care. Companies’ health service professionals should start the process of return to work at the first day of absence, in order to reduce the time of reintegration and to promote a sustainable return.

Acknowledgments CNPq Grants 423231/2018–9, 304375/2017–9, 306963/2021–3.

Carcinogens/Cancer

**O-41**

**FIREFIGHTING AND CANCER: A META-ANALYSIS OF COHORT STUDIES IN THE CONTEXT OF CANCER HAZARD IDENTIFICATION**

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1Monographs Programme, International Agency for Research on Cancer, France; 2International Agency for Research on Cancer, France; 3National Institute for Occupational Safety and Health, Cincinnati, USA; 4National Cancer Institute, Bethesda, USA; 5Rutgers School of Public Health, Piscataway, USA; 6Danish Cancer Society Research Centre, Copenhagen, Denmark; 7American Cancer Society, Kennesaw, USA; 8University of Sydney, Sydney, Australia; 9Cancer Registry of Norway, Oslo, Norway; 10Occupational Cancer Research Centre, Toronto, Canada; 11Monash University, Melbourne, Australia; 12University of Massachusetts Lowell, Lowell, USA

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Objective We performed a meta-analysis of epidemiological results for the association between occupational exposure as a firefighter and the occurrence of cancer as part of the broader evidence synthesis work of the IARC Monographs Programme.

Methods A systematic literature search was conducted to identify cohort studies of firefighters followed for cancer incidence and mortality. Studies were rated for the influence of key biases on results. Random-effects meta-analysis models were used to estimate the association between ever and duration of employment as a firefighter and risk of 12 selected cancers. The influence of potential biases was explored in sensitivity analyses, including those related to the use of general, uniformed service, and working population comparison groups.

Result Among the 16 cancer incidence studies that met inclusion criteria for one or more cancer sites, the estimated meta-rate ratio, 95% confidence interval (CI), and heterogeneity statistic (I²) for ever-employment as a predominantly male career firefighter compared mostly to general population were: 1.58 (1.14–2.20, 8%) for mesothelioma, 1.16 (1.08–1.26, 0%) for bladder cancer, 1.21 (1.12–1.32, 81%) for prostate cancer, 1.37 (1.03–1.82, 56%) for testicular cancer, 1.19 (1.07–1.32, 37%) for colon cancer, 1.36 (1.15–1.62, 83%) for melanoma, 1.12 (1.01–1.25, 0%) for non-Hodgkin lymphoma, 1.28 (1.02–1.61, 40%) for thyroid cancer, and 1.09 (0.92–1.29, 55%) for kidney cancer. Ever-employment as a firefighter was not positively associated with lung, nervous system, or stomach cancer. Few cancer