

for similar populations varies widely in the literature, but our number of 333 although high, is within the range reported.<sup>2</sup> These results raise questions over the cost-effectiveness and proportionality of the current screening process as a method of preventing TB among HCWs and protecting patients from forward transmission.

1420 **A STUDY ON PREVALENCE OF METABOLIC SYNDROME AND IMPACT OF WORK-PLACE EMPLOYEE WELLNESS PROMOTION PROGRAMS IN INDIAN CEMENT MANUFACTURING UNITS**

Vidya Kiran Bhat\*. *Ultratech Cement Limited, Chittorgarh, India*

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The metabolic syndrome (MetS) is a major and escalating public health and clinical challenge worldwide in the wake of urbanisation, surplus energy intake, increasing obesity, and sedentary life habits. It is a complex disorder comprising a group of interconnected cardio-metabolic risk factors, which includes abdominal obesity, insulin resistance, hypertension and high blood sugar that increase the risk of developing cardiovascular disease and type 2 diabetes mellitus, amongst other chronic metabolic abnormalities and leading to premature death. It is estimated that around 20–25 per cent of the world's adult population have the MetS, has an independent risk factor for cardiovascular disease and considered it an indication for intensive lifestyle modification. Balancing between energy expenditure and nutrition requirement is a delicate process that can be easily disrupted by environmental and genetic factors leading to the development of MetS.

In India, despite having 39% of the population as workforce, there is no data to understand the burden of accessible lifestyle disorders nor evidence towards efficacy of workplace health interventions. Given this, the present study was undertaken with an objective to identify and document the burden and ongoing healthy workplace interventions for control of MetS and Health Promotion in leading cement manufacturing units of Ultratech Cement limited, (An Aditya Birla Group) in India.

Periodical medical examination used to study prevalence for MetS. A total of 2176 workers of 18 to 58 years of age were included in this Pilot study. Questionnaire survey conducted to assess determinants of MetS. People with MetS are compared with healthy employees to understand the Impact of MetS on their work-life by analysing data of employees' Absenteeism, Medical insurance claim for self, Near misses, First-aid injuries. Data compared with general prevalence of MetS in India and globally. Work-place employee wellness programs of organisation reanalyzed to check its impact on health.

1126 **A NEW PRACTICAL PROCEDURE FOR ASSESSING CARDIORESPIRATORY FITNESS IN WORKPLACE HEALTH CHECK-UPS**

<sup>1,2</sup>Tomoaki Matsuo\*, <sup>2</sup>Rina So. <sup>1</sup>Occupational Epidemiology Research Group, National Institute of Occupational Safety and Health, Japan; <sup>2</sup>Research Centre for Overwork-Related Disorders, National Institute of Occupational Safety and Health, Japan

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**Introduction** Japan faces a serious national issue of declining worker numbers due to low birth-rate and longevity. There is an increased need to maintain workers' health and extend the working years prior to workforce retirement. Hence, research in workers' physical fitness will play a significant role in occupational health issues. Cardiorespiratory fitness (CRF) assessed by maximal oxygen consumption ( $VO_{2max}$ ) plays an important role in workers' health. However, measuring  $VO_{2max}$  can be burdensome for subjects and requires skilled examiners. This is a practical disadvantage for including  $VO_{2max}$  in workplace health check-ups. In this study, we developed a new CRF measurement procedure in lieu of measuring  $VO_{2max}$ .

**Methods** Our study participants included 101 Japanese workers (55 men and 46 women, aged 30 to 59 years). We measured subjects'  $VO_{2max}$  by the Bruce protocol using treadmill exercise and an indirect calorimeter. Subjects also completed two newly devised assessments: (1) a step-test consisting of a 3 min stepping exercise followed by a 2 min rest and (2) a questionnaire measuring workers' physical activity level during working time and during non-working time on workdays and non-workdays. We conducted multiple regression analyses with  $VO_{2max}$  as a dependent variable and parameters obtained from the procedure as independent variables.

**Results** We chose the combined heart rates during the step-test's exercise and recovery periods and the questionnaire's total score as significant ( $p < 0.05$ ) independent variables. In a multiple regression model, age (years), sex (1, 0), heart rates during the step-test (beats) and total score on the questionnaire (points) accounted for 58.6% of the  $VO_{2max}$  variance.

**Conclusion** The procedure we developed can be performed without a heavy exercise burden on the subject or special skills of the examiner. This study suggests that the procedure can potentially be used to assess CRF in the worker's health check-ups where  $VO_{2max}$  measurements are not available.

1751 **INFLUENZA VACCINATION UPTAKE IN HEALTHCARE WORKERS IN IRELAND: EFFECTIVENESS OF A BRIEF EDUCATIONAL INTERVENTION IN PROMOTING POSITIVE ATTITUDINAL CHANGE**

<sup>1</sup>Grainne McNally, <sup>1</sup>Conor McDonnell, <sup>1,2</sup>Laura Tobin. <sup>1</sup>University Hospital Limerick, Co Limerick, Ireland; <sup>2</sup>Healthy Ireland Project, Co Limerick, Ireland

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**Introduction** Annual Influenza vaccination rates among Healthcare Workers (HCW) in Ireland are almost universally low despite national and international recommendations. Improving HCW Influenza vaccination rates remains an annual challenge for Occupational Health Departments. Previously studied intervention strategies that increased vaccine uptake internationally include: provision of free vaccine, easy access to the vaccine, knowledge and behaviour modification through educational activities and/or reminders and/or incentives. The aim of this study was to determine if attitudes towards the Influenza vaccination in HCW in Ireland remained a barrier to uptake of vaccination and if a brief educational intervention could cause an attitudinal shift towards receiving the vaccination. It also questioned the attitudes of HCW towards mandatory Influenza vaccination.

**Methods** A brief interventional video was commissioned locally prior to the start of the national influenza campaign 2017/18. It contained local healthcare staff discussing evidence based