Discussion These findings show that some groups of workers face a higher risk of work-related MSD and that further monitoring and targeted measures are needed to support employers and employees especially at a time of economic recovery.

Full results and description of the methodology can be found at http://www.esri.ie/publications/work-related-illness/

540 POST-OFFER/ PRE-EMPLOYMENT SCREENING FOR CARPAL TUNNEL SYNDROME AND OTHER MUSCULOSKELETAL DISORDERS: IS IT EFFECTIVE?

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Introduction Pre-employment examinations, known as post-offer pre-placement (POPP) tests in the US, are performed by many US employers to prevent work-related musculoskeletal disorders (MSDs) such as carpal tunnel syndrome (CTS). However, there is no strong evidence of effectiveness of such screening. We tested the predictive validity of POPP screening using nerve conduction studies (NCS) to identify future cases of carpal tunnel syndrome (CTS) among manufacturing workers.

Methods We used data from a natural experiment in which 1648 newly hired production workers in a manufacturing plant underwent baseline physical exam and NCS, but were hired regardless of test results. Workers were then followed for up to 5 years; outcomes of CTS and workplace physical exposures in different jobs were obtained from the employer’s medical and safety records.

Results There was no association between NCV results at the time of hire and future CTS. Varying the diagnostic cut-offs for determining ‘abnormal’ NCS did not improve predictive validity. However, workers in jobs with high hand/wrist exposure showed greater risk of CTS than those in low exposed jobs (Relative Risk 2.82; 95% CI: 1.52 to 5.22).

Discussion NCS and other screening tests for the musculoskeletal system are commonly used in the US as a primary means to reduce or prevent MSDs, despite little evidence that such testing predicts which workers will incur MSDs in the future. Ours is the third study to find that POPP screening is ineffective as a preventive strategy for CTS. Other common testing strategies for MSDs do not satisfy evidence-based criteria, and their use should be scrutinised. Such screening seems a poor use of health and safety resources, which could better be spent on improving work activities to reduce injury risk for the entire worker population.

603 WORKPLACE PRACTICES AND POLICIES TO PREVENT MSD: DEVELOPING AN IMPLEMENTATION GUIDE

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Introduction Musculoskeletal disorders (MSD) continue to be a major burden for workplaces and workers as well as insurance and health systems. Evidence-based approaches are desired but research-to-practice gaps remain. One reason for gaps is the necessary research of sufficient quality is often not available. However evidence-based practice considers both scientific evidence as well as practitioner expertise. Our objective is to synthesise evidence from the scientific literature, practice evidence (policies and practices), and experiences from stakeholders.