Despite these obstacles there are approaches to overcoming the hurdles identified, and increasing occupational epidemiology research in developing countries.

Oral Presentation

Policy/Impact

0209

CKDU: INTERVENTION TO POLICY * THIS IS PART OF THE MINI-SYMPOSIUM ORGANISED BY TORD KJELLSTROM

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Background In Mesoamerica CKDu(Chronic Kidney Disease of unknown cause) is epidemic among sugarcane workers and present in other workers. Excessive heat stress and workload are believed to contribute to onset and acceleration of CKDu. The Worker Health and Efficiency (WE) Program is the first evaluated intervention to address excessive heat stress and workload in sugarcane workers. We used the resulting press, political and industry attention to push for a wider agenda of worker protections.

Objectives • Evaluate impact of intervention on patterns of heat illness/dehydration, kidney function, physical workload and productivity.

• Demonstrate need for governments and industry to address CKDu and excessive heat stress in sugarcane- and other workers.

Methods The WE intervention was piloted in two cohorts of workers, one inland and one coastal sugarcane cutters (totaling 117 individuals); thus, allowing assessment of the intervention via self-controls. Concurrently, outreach to industries and governments was conducted to exchange information. Using press and myriad contacts, private and public policy began to rapidly change.

Results Pilot data analysis demonstrated a decrease in heat-related illness, improved hydration, and possibly a stabilisation in kidney function. Marked increase in productivity was also observed. The results drove policy discussions and measurable change in several companies, and the U.S. and Costa Rican Governments.

Conclusion An evidenced-based dialogue between sugar industry farmers, millers, buyers, and governments was created. There are several challenges that remain, and navigating the path to where we are holds valuable lessons for those doing similar work.

Oral Presentation

Reproductive Effects

0212

COMBINED EXPOSURE TO LIFTING AND PSYCHOSOCIAL STRAIN AT WORK AND ADVERSE PREGNANCY OUTCOMES - THE DANISH NATIONAL BIRTH COHORT

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Lifting and high psychosocial strain at work has both been associated with adverse birth outcomes, but no studies have investigated the consequences for pregnancy, when they co-occur. Hence, we aimed to investigate the combined effect of lifting and psychosocial strain at work on pregnancy and foetal growth, using the Danish National Birth Cohort (children born 1996-2002). Women were included if pregnant with singletons at gestational age (GA) 22 and worked ≥ 30 hours/week (N=47,582). Work exposures were extracted from an interview at GA 16 (± 3.0). We applied a continuous lifting variable from four questions about heavy and medium lifting, and a psychosocial strain variable, from two questions about demand and influence combined into the four categories of the Demand-Control Model. Pregnancy outcomes were available from the Danish Medical Birth Register: Preterm birth (week 22-36); term birth (week 37-44) but small for GA; term birth but large for GA; and term birth with normal weight (reference group). The overall adjusted multinomial logistic regression analysis showed significant interaction between lifting and job strain with respect to the four outcomes all together ($p=0.007$). Stratified analyses on the psychosocial exposure showed women in the high strain group had an increased risk of preterm birth (OR=1.04; 95%-CI 1.01-1.06) and having a child large for GA (OR=1.04; 95%-CI 1.01-1.06) for each additional 50 kg lifted. For women in the low strain, passive and active groups, lifting was not associated with the outcomes. Co-occurrence of high strain and lifting seems to increase the risk of adverse birth outcomes.

Oral Presentation

Other

0213

THE IMPACT OF THE NORWEGIAN COOPERATION AGREEMENT ON A MORE INCLUSIVE WORKING LIFE (IA AGREEMENT) ON SICKNESS ABSENCE AND DISABILITY PENSIONING

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Background Increasing work participation is an important political objective in many countries. In Norway, a voluntary national intervention program aimed at increasing work participation (the IA Agreement) was implemented in 2001, and is still ongoing. One of the main goals of the IA Agreement is to reduce sickness absence (SA) and disability pensions (DP). Organisations that sign the agreement commit themselves to take active measures in order to reduce SA and DP, and in return, they are given special rights such as grants for workplace adjustments and job training. Scientific evaluations of the IA Agreement have been limited. We aim to estimate the impact of the IA Agreement on SA and DP in Norway during 2001–2009.

Methods The source population is a national cohort of all 626 928 individuals born 1967–1976. Individual-level data on SA, DP, employment, and background characteristics were obtained from national registries. We apply a quasi-experimental design using difference-in-difference analysis, comparing employees in IA organisations (intervention group) with employees in non-IA organisations (control group), with respect to pre-post differences in SA and DP.

Results The IA Agreement was signed by 13 760 organisations by March 2003 and covered 43% of Norwegian employees. Compared to the general working population, IA organisations had a higher proportion of women and workers in the health-care sector. We will analyse the nationwide impact of the IA Agreement on SA and DP and explore differences by gender, industry and diagnostic category.

Poster Presentation

Other

0214 TRANSITIONS OF BLOOD LEAD LEVELS OF PRESCHOOL CHILDREN ACROSS COUNTRIES OF VARIOUS EXTENT OF DEVELOPMENT

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Lead exposure has long been recognised as a threat to human health. In the last century, tons of studies demonstrated the adverse health effects of lead exposure on neural and haematological systems in human body, and resulted in the restraint of lead use, including the elimination of leaded gasoline and lead-containing paint in the past decades. This study was aimed to profile preschool children blood lead level distribution around the world. Information on blood lead levels was obtained based on peer reviewed articles accessed through dataset like PubMed, etc. Study subject inclusion criteria were set as children aged 1–7 years old without hot-spot lead exposure. Collected data were plotted in chronicle by group of UN Human Development Index (HDI) to establish the transition trends of blood lead levels in the past three decades. For the very high HDI countries, the mode of blood lead level of preschool children was reduced from 4–6 µg/dL to 0.8–1.5 µg/dL, while that for the high HDI

countries was down from 8–12 µg/dL to 3–5 µg/dL, and no substantially decrease was observed for the medium and low HDI countries. Extrapolation analysis showed the decreasing trend would reach the possible ground level of around 0.3–0.5 µg/dL for the very high HDI countries in the next two decades. Results of this study provided advices on strategy planning and source allocation for lead exposure prevention across countries of various extent of development.

Poster Presentation

Disease Surveillance

0215 INTERNATIONALISING SIGNAAL: THE EUROPEAN CHANCE IN OCCUPATIONAL HEALTH VIGILANCE – PROPOSAL FOR THE SPANISH VERSION

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Introduction SIGNAAL is an online non-compensation-based sentinel system to notify possibly new work-related diseases[1]. It is in place since July 2013 in the Netherlands and Belgium and currently in pilot phase in Italy. Through SIGNAAL physicians report diseases they suspect to be work-related: experts assess them identifying possible new occupational health risks. Our aim is to develop the Spanish SIGNAAL to detect these new risks in Spain[1,2].

Methods Every part of the online tool will be translated and adapted. The online platform will be developed. A separate team of Spanish assessors within the Occupational Diseases Unit (UPL) of Barcelona will be trained to assess cases reported to the system. SIGNAAL will be promoted through publications, conferences and advertising.

Results Expected Spanish cases will be assessed within the Spanish SIGNAAL. Costs: periodically presented to assess feasibility and acceptability; effectiveness: evaluated in helping the Public Health System to obtain diseases recognition as occupational (and to claim for them); data usage: for informing policy and preventive measures, at a company level but also involving Public Health stakeholders[3,4]; spreading: progress reports and publications in peer-reviewed journals[4,5]. By August 2017 the Spanish SIGNAAL will be in pilot phase, so its first results can be presented with examples and encountered pitfalls[5].

Conclusions An online reporting system within the occupational health framework can provide valuable data on new occupational health risks, especially while using the same tool in several countries to produce comparable information. Internationalising SIGNAAL is a first step to promote Occupational Health Vigilance across Europe[2,6].