

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].

Oral Presentation

Exposure Assessment

0216 OCCUPATIONAL RADIATION DOSES IN NUCLEAR MEDICINE: A US MULTI-CENTRE STUDY

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Nuclear medicine techniques developed in the second half of the 20th century have become very sophisticated and have been used extensively in the diagnosis and treatment of disease. A surge of new dedicated radiopharmaceuticals and increased demand has led to a growing interest regarding increasing radiation exposure and possible associated health risks to the nuclear medicine technologists who perform these procedures. However, to date, very limited information has been provided on radiation doses received by nuclear medicine technologists.

In this study, we collected annual and lifetime badge dose information for United States technologists certified in nuclear medicine between 1979 and 2015. Nine large US medical institutions from several geographical locations contributed information on 208 nuclear medicine technologists, linked to historical badge dose records maintained by a major commercial dosimetry company, yielding 2618 total dose records.

The mean and median annual badge doses per technologist were 2.7 and 2.2 mSv, respectively, and more than 3% of the annual doses exceeded 10 mSv. The mean annual doses substantially increased around the year 2000, consistent with the expanded use of Positron Emission Tomography (PET). Mean and median lifetime doses of 51.4 and 32.9 mSv could be established for 45 technologists.

Doses in this sample of nuclear medicine technologists were higher than expected, compared with previously published values for nuclear workers or radiologic technologists. These results suggest that nuclear medicine technologists may be one of the most highly-exposed radiation worker populations currently.

Poster Presentation

Methodology

0217 MESOTHELIOMA AND CANCER OF THE PLEURA DEATHS – RECOVERING MISSING CASES FROM HOSPITAL RECORDS

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Background Mesothelioma is a rare cancer of high lethality associated with asbestos exposure. In several studies mesothelioma and cancer of the pleura (MCP) are analysed together because misdiagnoses or coding errors between them are common. Undercounting and underreporting of these diseases have been demonstrated, particularly where access to diagnostic resources is poor as for developing countries.

Objective To examine the performance of a probabilistic linkage used to match data from death certificates (Mortality Information System) to deaths reported in hospital records (Authorisation of Hospital Admissions of the National Health System).

Methods Cases with diagnosis coded as C45.0 - C45.9 and C38.4 (International Classification of Diseases 10th Revision) were selected from each anonymous database from 2002 to 2012, Brazil. After probabilistic linkage, matched and unmatched cases were combined in a single individual database. Linkage performance was examined by confirming matched cases based on similar datasets which includes full names, available only for the São Paulo state.

Results A total of 1059 MPC cases were found, 718 (71.7%) with records only in the Mortality Information System, 277 (23.6%) registered exclusively in the hospital database, and 57 (5.7%) matched with data in both databases. The majority of hospital unmatched cases had other cancer diagnosis as the underlying cause of death (87.4%). Linkage failed to match only five cases due to inconsistencies in birth dates or gender records.

Conclusions Probabilistic linkage can be a tool to recover missing cases of MCP in death certificates using hospital admissions records in Brazil.

Oral Presentation

Developing Countries

0218 WORK-RELATED INJURY MORTALITY AMONG CHILDREN AND ADOLESCENTS IN BRAZIL, 2000 – 2014

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Objective Fatal work-related injuries among children and adolescents cause outrage and reveal the failure in the protection of these vulnerable groups. This study estimates the work-related injuries mortality rate among Brazilian workers aged 10 to 24 years between 2000 and 2014.

Methods This is a mortality study carried out with data from the Mortality Information System, SIM, and census data from the Brazilian Institute of Geography and Statistics, IBGE. Cases were identified using data on the work-related nature of the injury, compulsory in death certificates for external causes. Estimates are separated by age ranges for which distinct protective norms are applicable.

Results In total, there were 7484 fatal work-related injuries during the study time. Of these, 2.8% (n=208) among children from 10 to 14 years old, 9.2% (n=691) in the group