

**Objectives** Drawing on a literature review on sentinel and alert systems for identifying new/emerging work-related diseases (WRDs) a basic typology of systems was developed. These systems differ in characteristics, ability to capture new WRDs and link with prevention. The objectives of the subsequent study of a subset of systems were to describe in-depth aims, drivers and obstacles of the systems and use of their data in practice, for prevention and detecting new/emerging WRDs.

**Methods** Twelve systems were chosen reflecting the different types (linked to compensation or not, aimed at all WRDs or a subset of diseases, sentinel systems, workers only or general public). Six systems were described based on desk research and six other systems were studied through interviews with different actors to gather information on the operation of the systems and the use of the gathered data for prevention.

**Results** Several important themes emerged from the comparative tables, related to the design and performance of the system: visibility, reporting methods, exposure assessment, data quality, linkage to other institutions, and related to data use for prevention, alert on hazardous situations, awareness on new/emerging diseases.

**Conclusions** Each system has its strengths and limitations, closely related to its purpose and the country that developed it. Sentinel systems seem to be best equipped for prevention and alert on new/emerging diseases. Enhancing reporting needs to balance required information and perceived reward for reporters. Embedding of systems in governmental or public health organisations is important in terms of financing, expertise and dissemination of results.

## Oral Presentation

### Other

#### 0182 HIGH SCHOOL DROPOUT AND CAUSE-SPECIFIC MORTALITY IN YOUNG ADULthood: THE MEDIATING ROLE OF WORK CAREER

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**Objectives** High school dropout has unfavourable consequences. We examine the association between dropout and mortality and estimate the mediating role of an unfavourable work trajectory.

**Methods** Subjects born in Norway 1967–1976 were followed up in several national registries. The association between dropping out of high school by age 23 and all-cause and cause-specific mortality 10 years onwards were estimated as hazard ratios (HR), applying Cox regression in confounder-adjusted models. Characteristics relating to different trajectories during follow-up were considered as mediators of dropout effects on survival.

**Results** Thirty-nine percent out of 396 373 participants were classified as dropouts. All-cause mortality during follow-up was 69 per 1 00 000 person-years (2689 cases). The crude

dropout HR was 2.1 (1.9–2.3), being reduced to 1.8 (1.6–2.0) in the confounder-adjusted model. After including the potential mediators in the model, dropouts no longer had an excess mortality compared to non-dropouts (HR 1.0, CI (0.9–1.1)). Mediators relating to financial situation, social benefits and employment accounted for the largest reduction in the association. Deaths caused by overdose and drug dependence were strongly associated with dropout (454 cases; rate 12; confounder-adjusted HR 5.0 (3.8–6.5)). Inclusion of work trajectory factors attenuated the association by 63% (women) and 48% (men).

**Conclusions** Mortality was clearly associated with high school dropout, strongest for drug-related causes. The results suggest that an unfavourable work career following high school dropout could be an important mechanism for this association.

## Poster Presentation

### Neurological Effects

#### 0183 PREDICTORS OF WORK ABILITY IN SOLVENT EXPOSED WORKERS

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**Introduction** Occupational chronic solvent encephalopathy (CSE) often leads to early retirement. However, little is known about work ability in solvent exposed workers in general. The aim was to study the effect of work-related and non-occupational factors on work ability in active solvent exposed population.

**Methods** A questionnaire on exposure and health was sent to 3640 workers in four solvent-exposed fields, i.e. painters and floor-layers, boat builders, printers, and metal workers, resulting in 1730 responses. Work Ability Score (WAS), a single question item of Work Ability Index, solvent exposure, demographic factors, chronic diseases, and employment status were considered in univariate and multivariate analysis. The findings were compared to those of corresponding national blue-collar reference population (n=221), and in addition to a small cohort of workers with CSE (n=18).

**Results** WAS of solvent-exposed workers was lower than that of national reference group, the difference being significant in the oldest age group, but higher than that of workers diagnosed with CSE. Number of chronic diseases and age were the strongest explanatory factors of poor work ability. Solvent exposure was a weak independent risk factor for reduced WAS. Work ability was highest in boat builders, followed by metal workers and printers, and lowest in painters and floor layers.

**Conclusions** In general, the strongest explanatory factors of reduced WAS were chronic diseases, age, and working status. The weak effect of solvents on work ability is in line with improved occupational hygiene and declined solvent exposure levels in an industrialised country. As a single question WAS is easily included in occupational screening questionnaires.