Long-term sickness absence is increasing in 27 European member states and Norway. Promoting good health and attendance, instead of penalising absence, has become a growing policy issue (Edwards & Greasley, 2010). As most employees will return to work spontaneously, resources for return to work projects should be focused on the high-risk group for long-term sickness absence.

In this project a questionnaire was developed to predict the risk of long-term sickness absence.

The development of the questionnaire started with a literature review of the predictive factors for long-term sickness absence, and with a review of existing questionnaires that question long-term sickness absence. The questionnaire will be validated in a pilot study of 10 000 participants. These data will be used to calculate its predictive value and to build a model to predict the risk of long-term sickness absence.

The literature study revealed 16 predictors for long-term sickness absence. The most predictive factor is, according to existing research, the patient's expectancy regarding their return to work. As the other factors are not unambiguously strong predictors, the pilot study will explore the predictive value of the complete model and each separate parameter. A new questionnaire was developed based on both reviews and the 16 predictors they revealed. The questionnaire is not specific for a certain illness, nor for use in a specific country.

The questionnaire developed in this research will support physicians to assess the risk of long-term sickness absence, and to guide more employees successfully and sustainably back to work.

Poster Presentation

Exposure Assessment

0121 DATA ANALYSIS FOR BIOLOGICAL MONITORING IN SOUTH KOREA'S OCCUPATIONAL HEALTH FIELD

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10.1136/oemed-2017-104636.95

Object This study aims to provide a basis for policy to control the reliability of biological monitoring laboratories in occupational health by analysing data on annual biological monitoring.

Method We collected the survey requesting the number of data provided in 2014 and 2015, which laboratories participating in proficiency test program on biological monitoring responded to. Statistical data for biological monitoring (2003–2004) to reveal the current status of biological monitoring practices in the hospitals or occupational health laboratories were extracted from the KOSHA.

Result The total number of data of biological markers was up to 2 70 000 cases and 4 70 000 cases in 2013, 2014, respectively. Among them, the most dominant markers with regard to organic solvent exposure were urinary hippuric acid, methylhippuric acid and 2,5-hexanedione with 3 47 000 cases reported for 2 years. As for metal exposure, lead and

cadmium in blood were the most frequently checked markers with 1 16 000 cases for 2 years. Among 180 occupational health organisations, 44% of them sent their samples to other laboratories for analysis. The problem of lack of proficiency test data was evident in biological markers including 2,5-hexanedione, N-methylformamide, and trichloroacetic acid, which were analysed in major big laboratories. Strict policy on these laboratories as well as tactics to encourage small laboratories to join more proficiency test items, were suggested.

Conclusion From the database of biological monitoring, the lack of reliability of biological monitoring in many biological markers was revealed. Future action to improve the reliability of all the biological monitoring analysis is requested.

Oral Presentation

Exposure Assessment

0123 RECONSTRUCTION OF INDIVIDUAL RADIATION DOSES IN A COHORT OF FRENCH NUCLEAR WORKERS: CONSIDERING DOSES UNDER THE RECORDING THRESHOLD

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10.1136/oemed-2017-104636.96

Context The French nuclear worker cohort enables the evaluation of potential health effects of protracted low doses of ionising radiation. Dosimeters worn by the workers record annual individual exposure. However, below a certain value called recording threshold, dose quantification is too imprecise to be recorded and the dose is then considered to be null. This study aims to evaluate the magnitude of doses below the recording threshold with regards to the recorded doses.

Methods The cohort includes 59 004 workers, hired from 1950 and followed-up until 2004. A comprehensive review of the dosimetry practices in the facilities participating in the study was performed. Data on recording thresholds, minimal detectable levels and dosimeter reading frequencies was collected and analysed. Scenarios based on monthly data were used to impute doses under the threshold.

Results Recording threshold doses and reading frequencies decreased substantially over the cohort's follow-up period (from 0.5 to 0.2 milliSievert and from bimonthly to quarterly respectively) but the annual percentage of null recorded doses increased (from 51% to 91%). Results from the imputation of below the threshold doses will be presented.

Conclusion The estimation of doses under the threshold is complex, needs a precise reconstruction of the monitoring history, and requires modelling assumptions. Preliminary results indicate that the availability of monthly data plays a crucial role in evaluating the magnitude of doses under the recording threshold.

Declaration of potential conflict of interest: The work under consideration gets into the general framework of a research program with shared financial support by IRSN, AREVA and EDF.