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Title: Epidemiological analysis of the incidence and risk factors for coal-workers' pneumoconioses in the Silesia, Poland during period 2003-2011

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Body: The aim of the study was to evaluate the incidence and identify risk factors for coal-workers' pneumoconioses in the Silesian coal mines. The epidemiological data on the registered cases of coal–workers' pneumoconioses from the regional statistics was collected. The incidence ratios were calculated according to the each coal mine. Then the coal mines with the high, medium and low incidence of pneumoconioses were identified and compared in terms of age of coal – workers, duration of exposure, levels of exposure, type of coal bed, type of extracted coal, number of workplaces with the levels of exposure to dust exceeding the normative values. In the period 2003-2011 3,723 cases of coal-workers' pneumoconioses were diagnosed. Most of the cases – 98,8% affected the coal miners working in the underground. The average age of the workers with coal workers' pneumoconiosis was 56 (+/-10.2) years and the average duration of exposure to coal dust 24 (+/- 4.5) years. In coal mine characterized by the medium incidence of pneumoconioses in the period 2003-2011 the total number of diagnosed cases of this disease was 161. In years 2010-2011 the trend towards the increase of cases of coal-workers' pneumoconioses was observed. According to the results of dust measurements performed in this coal mine in the 84% of the workplaces the normative values of total dust exceeded the normative values and in the 81% the respirable fraction of dust exceeded the normative values. These preliminary results confirm that despite the technical and medical prevention systems the high incidence of coal workers' pneumoconioses is an important public health problem in Poland.