TRAFFIC-RELATED AIR POLLUTION IMPACT ON HEALTH OF WARSAW CITIZENS

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Road transport contributes significantly to air quality problems through vehicle emissions, which have various detrimental impacts on public health and the environment. The aim of this study was to assess the negative impact of traffic-related air pollution on health of Warsaw citizens, following the basics of the Health Impact Assessment (HIA) method, and evaluate its social cost. PM_{10} was chosen as an indicator of traffic-related air pollution. Exposure-response functions between air pollution and health impacts were employed. Value of statistical life (VOLS) approach was used for the estimation of the cost of traffic-related air pollution attributable mortality. Costs of hospitalizations and restricted activity days were assessed basing on the cost of illness (COI) method. According to the calculations, about 827 Warsaw citizens die in one year as a result of traffic-related air pollution, about 566 and 250 hospital admissions due to (respectively) cardiovascular and respiratory diseases and more than 128 453 restricted activity days can be attributed to the traffic emissions. From the social perspective these losses generate cost of 1 604 mio. PLN (1 EUR – approx. 4.2 PLN). This cost is very high and therefore more attention should be paid for the integrated environmental health policy.