Abstract

Objective. To conduct a health impact assessment (HIA) to quantify health benefits for several PM and O₃ air pollution reduction scenarios in the Mexico City Metropolitan Area (MCMA). Results from this HIA will contribute to the scientific support of the MCMA air quality management plan (PROAIRE) for the period 2011-2020. Materials and methods. The HIA methodology consisted of four steps: 1) selection of the air pollution reduction scenarios, 2) identification of the at-risk population and health outcomes for the 2005 baseline scenario, 3) selection of concentration-response functions and 4) estimation of health impacts. Results. Reductions of PM₁₀ levels to 20 g/m³ and O₃ levels to 0.050 ppm (98 g/m³) would prevent 2300 and 400 annual deaths respectively. The greatest health impact was seen in the over-65 age group and in mortality due to cardiopulmonary and cardiovascular disease. Conclusion. Improved air quality in the MCMA could provide significant health benefits through focusing interventions by exposure zones.

Keywords

Air pollution, health impact assessment, Mexico City.