

Irish Nationwide Health and Air Quality Linkage

(INHALE)

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Abstract

Background

Risk assessment of outdoor air pollution has been performed in many populations worldwide for premature mortality and certain morbidities. These studies highlight the need for population specific assessment because the relationship between air pollution and health is influenced by a range of factors, from underlying population age, health status, and social environment to the exposure levels and sources, weather patterns and temperature. Exposure depends on *local* emission sources, meteorology and transported air pollution and air quality varies on daily basis. Site-specific and seasonal variations in the physico-chemical characteristics of ambient PM pollution and associated health effects may occur. Because of these modifying effects of exposure (and therefore dose) it is imperative to fully evaluate the health, social and economic cost of air pollution specific to Ireland. The aim of INHALE, funded by the EPA and HSE, is to provide recommendations on data collection infrastructure (air quality monitoring networks, health databases and administrative sources) to facilitate estimation of the impact of air quality on health outcomes and healthcare costs in Ireland.

Methods

Existing air quality and health data will be assessed for quality and suitability for research. The feasibility of linking existing data domains will be explored and barriers to linkage identified.

Key policy implications

The information gathered from this project will inform environmental policy development and assessment.

Conclusion

The project outputs will inform policy and contribute to the long-term objectives of the EPA and HSE: achieving levels of emissions that minimize unacceptable harm to human health and the environment.