

## **Wicked Environmental Policies: Impacts on Children's Health and the Role of Health Experts in Shaping Policy**

**Authors :** Clare Walter, Nina Lansbury, Peter Sly, Brian Head

**Abstract :** Asthma is one of the most prevalent chronic diseases in Australia, affecting quality of life, limiting productivity, and placing a significant burden on the healthcare system and taxpayers. The continuation of car-centric urban design, along with divergent policy pathways related to fuel standards, vehicle regulations and freight transport, play a significant role in asthma incidence and prevalence in Australia, particularly in children. Using the empirical focus of reducing children's exposure to traffic pollution, this research aims to explore the role played by health experts in addressing research-policy gaps for 'wicked' environmental policy decisions where public health is weighed against competing political interests. Quantitative methods are used to explore childhood asthma risks related to two policy decisions. 1) The state planning approval for a major Victorian road project and 2). the state and local government process for siting childcare centers and schools. Qualitative methods of document analysis and semi-structured interviews are used to construct a case study that explores the interplay of public health evidence and expertise with politics, competing economic interests, and community activism in Melbourne's inner west. The case study provides one of the first pieces of empirical evidence related to the science-policy interface of a contested environmental health issue in Australia. The evidence produced provides valuable lessons for scientists and health experts seeking to influence policies for the betterment of public health and the environment. It is hoped it will contribute towards practical guidelines that help balance advocacy, policy influence and evidence-based expertise.

**Keywords :** traffic pollution, urban planning, childhood asthma, environmental policy, health risk assessment

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