Network *for* Environmental Risk Assessment *and* Management

Policy Analysis Tools for Air Quality and Health

1. Report from the May 2005 Workshop and
2. Proposal for a Second Workshop to Demonstrate Existing Models to Evaluate Air Quality Interventions by Municipalities

Report 1 available at www.irr-neram.ca

The May Workshop was organized by NERAM and Pollution Probe under the direction of a multi-stakeholder Planning Committee:

Jay Barclay, *Environment Canada*
Monica Campbell, *Toronto Public Health*
Walter Chan, *Ontario Ministry of Environment*
Quentin Chiotti, *Pollution Probe*
Anton Davies, *RWDI*
Murray Finkelstein, *McMaster Institute of Environment and Health*
Geoff Granville, *Canadian Petroleum Products Institute*
Eric Miller, *University of Toronto*
Glen Okrainetz, *Ministry of Water Land and Air Protection, BC*
Kim Perrotta, *Ontario Public Health Association*
John Shortreed, *NERAM*
Dave Stieb, *Health Canada*
Jesse Thé, *Lakes Environmental*

Sponsors for May 2005 were:

Lakes
Toronto
Ministry of the Environment
Health Canada / Santé Canada
Environment Canada / Environnement Canada
DOFASCO
RWDI Consulting Engineers & Scientists — Atmospheric, Industrial & Risk Services
Canadian Petroleum Products Institute / Institut canadien des produits pétroliers

Background to Workshop I (May 19, 2005)

Introduction

It is now universally recognized that poor air quality has adverse impacts on human health, and research confirms that residents in some areas of Canada are exposed to levels of air pollutants that are associated with morbidity and mortality. However, the total impact of current levels and trends of air pollution alongside current policies and those slated to be implemented in the near future is not well known. Many questions remain about how best to integrate policy options and how well broad policy initiatives perform compared to targeted regulations. In general, it is necessary to confirm that air pollution reduction measures have resulted in decreases in exposure and adverse health effects. Additionally, it is beneficial to be able to quantify the magnitude of change in health impacts and predict the effects of future policy initiatives. This information is also helpful in identifying where future policy initiatives need to be focused, including measures directed at multiple air issues (e.g. smog, acid rain, climate change).

Executive Summary of May 2005 Workshop

On May 19, 2005, the workshop "Policy Analysis Tools for Air Quality and Health" was held in Toronto, ON. The workshop gathered expert stakeholders from a variety of backgrounds including health and environment departments of municipal, provincial, and federal government, academia, consulting firms, industry, and NGOs. The workshop asked these experts to consider three questions:

1. What is the public health significance of air pollution?
2. Are there available models and analyses to inform policy at some level?
3. What are the key policy questions that should be addressed by models and analyses?

While poor air quality does have an impact on human health, many uncertainties complicate achieving a clear understanding of the relationship. Evaluation of health impacts should consider a variety of health outcomes and should be done in a manner that considers social and interactive effects.

There are a variety of policy analysis tools available to inform policy at a variety of levels, and the most useful are those that address multiple pollutants or effects. However, there are still significant barriers which limit the use of these tools, particularly in the local context. These barriers include the complexity and inaccessibility of computer-based models, the limitations in available data, and the limitations imposed by the multiple, overlapping governmental jurisdictions in which air quality issues are considered.

Participants desired models that are able to identify good policy options, and are efficient and cost-effective to use. They were interested in tools that maximized the integration of information in a comprehensive way. Support for continuous improvement and continued stakeholder dialogue was also indicated.

Executive Summary of May 2005 Workshop (continued)

Recommendation:

A second, longer workshop should be held to continue stakeholder dialogue and enable more in-depth exploration of policy analysis tools. This workshop would be national in scope, drawing from stakeholders and policy tools from different regions of the country. This workshop might also consider specifying the content/needs for a guidance document for the appropriate use of policy analysis tools, the possibility of a common analysis tool for use by municipalities, and the capabilities of the current model set.

The second workshop should include opportunities for health and environmental stakeholders to have direct interaction with modelers, and have hands-on experience with the suite of available policy analysis tools.

Proposal for 2nd Pollution Probe – NERAM Workshop on Analysis of Air Quality Interventions by Canadian Municipalities.

(Workshop depends on finding sponsors)

ASSUMPTIONS

a. Workshop would be in Toronto because that is where the majority of health impacts are happening.

b. Workshop would be hands on and would produce a guidance document for municipalities on how to evaluate interventions.- the guidance document would likely have a life of 3-5 years as an agreed basis for assessing municipal air quality interventions.

3 KEY ELEMENTS OF SECOND WORKSHOP

Case Studies and papers on basics of experience with models and the nature of guidance documents for direct use by municipalities.

Hands on Use of Models "what if:" questions to try out prototype models and input an intervention and get out a health impact and evaluation. There would be a demo based on the pre-workshop work with the GTA municipalities.

Interactive Sessions to Develop and Approve the Guidance Document for use by municipalities for evaluating interventions.

PRE WORKSHOP II ACTIVITIES

NERAM/Pollution Probe work with RWDI, Lakes and Environment Canada, Health Canada and other modellers to develop a set of models (including options where appropriate) for the hands on sessions to cover from intervention to health impacts and policy evaluation.

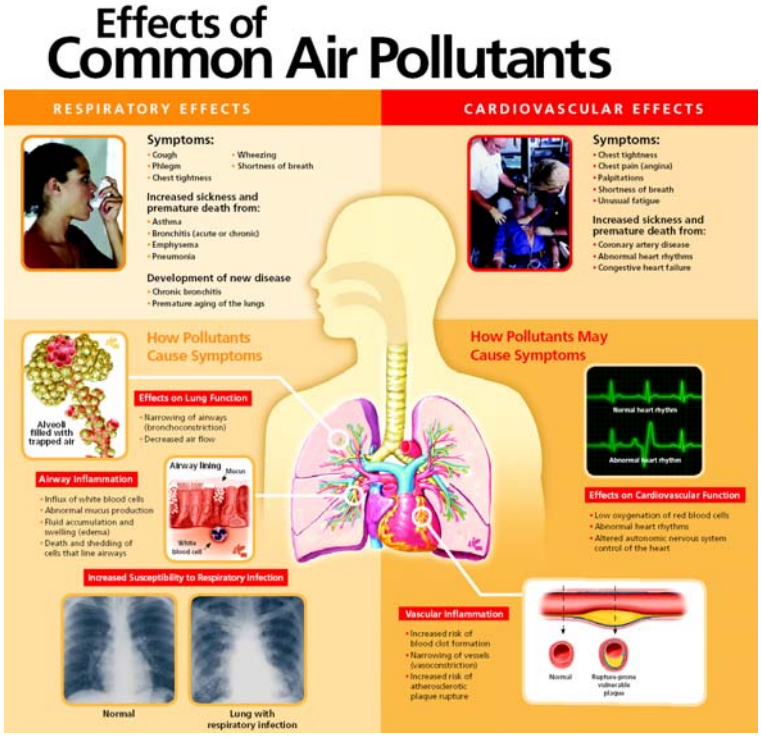
NERAM/Pollution Probe work with Metro and GTA people to test the suites of models in a pre-workshop workshop and develop an initial demo and example for GTA.

NERAM/Pollution Probe develop with the planning committee the approach to a guidance document to provide municipalities with advice on how to evaluate initiatives for reducing smog. The guidance document would contain advice on models, validation of models, standard approaches that until the guidance is revisited, would provide agreed standard advice on how to evaluate an intervention in terms of changes in health impacts.

For further information of the proposed workshop to Develop **Tools to Analyze Municipal Air Quality Intervention** please see:

John Shortreed
NERAM
Tel: (519) 888-4567, ext. 5527
Email: shortree@uwaterloo.ca

Quentin Chiotti
Pollution Probe
Tel: (416) 926-1907 x236
Email: qchiotti@pollutionprobe.org



http://www.epa.gov/airnow//health-prof/EPA_poster-final_lo-res.pdf