Personal Statement

Dr. Kevin Cromar is the Director of the Air Quality Program at the Marron Institute of Urban Management at New York University and a member of the Utah Air Quality Board. An environmental epidemiologist by training, he has appointments in the departments of Population Health and Environmental Medicine at NYU School of Medicine. He received a BS in Neuroscience from Brigham Young University and an MS and PhD in Environmental Health Science from New York University. He is recognized as an expert in environmental health policy having previously served as a research fellow at NYU School of Law Institute for Policy Integrity and currently serves as the vice-chair on the Environmental Health Policy Committee for the American Thoracic Society. His translational health and policy work has led to improvements in transportation, energy, and health policy at the local level both in the US and internationally. He current research includes collaborations with NASA, UNICEF, UNEP, and SEDEMA (Mexico City) and currently serves on the science advisory committee for the Air Quality Health Index of Health Canada. Cromar has published research on the health effects of air pollution using a variety of study designs including ecologic studies, cohort studies, and animal toxicology studies.

Contributions to Science

1. Improving exposure assessment for use in epidemiology studies and in public risk communication. Organizing chair of the recent inter-disciplinary workshop titled, "Air Pollution Monitoring for Health Research and Patient Care" which was co-sponsored by ATS, US EPA, NIEHS, and NASA. In just the last year has given invited symposium presentations on emerging exposure assessment approaches at the International Society of Exposure Assessment (ISES) Annual Meeting, NASA HAQAST4 Meeting, and the Air Sensors International Conference. In addition the providing exposure assessment for traditional epidemiological studies, application of exposure assessment principles in evaluating public risk communication of ambient air pollution has resulted in new research insights into the functionality of the U.S. Air Quality Index, the development of a new health-based air quality index for Mexico City on behalf of the Ministry of the Environment (SEDEMA), and serving as a member on the Air Quality Health Index Health Research Working Group for Health Canada. Example articles highlight work on exposure assessment for risk communication (a, b and e) and examples of traditional environmental epidemiology articles where I was responsible for exposure assessment among other aspects of the analysis (c and d).

    a. Perlmutt L*, and **K Cromar**. Comparing associations of respiratory risk for the EPA Air Quality Index and health-based air quality indices. (2019) Atmospheric Environment. *Accepted for publication*. https://doi.org/10.1016/j.atmosenv.2019.01.011
    b. Borbet T*, Gladson L*, and **K Cromar**. Assessing Air Quality Index Awareness and Use in Mexico City. (2018) BMC Public Health. 2018 Apr 23;18(1):538. doi: 10.1186/s12889-018-5418-5
    c. Shanley R, Hayes R, **Cromar K**, Ito K, Gordon T, and J Ahn. Particulate Air Pollution and Clinical Cardiovascular Disease Risk Factors. (2016) Epidemiology. 2016:27(2):291-298.
    d. Thurston G, Ahn J, **Cromar K**, Shao Y, Reynolds H, Jerrett M, Lim C, Shanley R, Park Y, and R Hayes. Ambient Particulate Matter Air Pollution Exposure and Mortality in the NIH-AARP Diet and Health Cohort. (2016) Environmental Health Perspectives. 2016 Apr; 124(4):484-490.
    e. Perlmutt L*, D Stieb, and **K Cromar**. Accuracy of Quantification of Risk Using a Single-Pollutant Air Quality Index. (2015) Journal of Exposure Science and Environmental Epidemiology. doi:10.1038/jes.2015.43

    *indicates student or trainee in Dr. Cromar's lab.

2. Translating environmental epidemiology methods and results into a policy evaluation framework. I have made meaningful policy-relevant impacts through the sharing of our research results and providing advisory contributions based on our research. This policy relevant research studies are focused on providing policymakers with the critical information needed to make effective public decisions. In each circumstance the there is a bidirectional relationship between science and policy, each informing the other. Related to these contributions are the contributions made through submitted comments on federal policies, providing content for amicus briefs on key environmental cases, and directly applying results from research in science advisory capacities.

a. Ghazipura M*, Garshick E, and **K Cromar**. Ambient $PM_{2.5}$ Exposures and Risk of Lung Cancer Incidence in North America and Europe. (2019) *Environmental Research Communications. Accepted for publication* https://doi.org/10.1088/2515-7620/ab06e9
b. **Cromar K**, Gladson, L*, Ghazipura M*, and G Ewart. ATS and Marron Institute Report: Estimated Excess Mortality Associated with Air Pollution above ATS-recommended Standards, 2013-2015. (2018) Annals of the American Thoracic Society. 2018 May; 15(5):542-551.
c. **Cromar K**, Gladson L*, Perlmutt L*, Ghazipura M*, and G Ewart. American Thoracic Society and Marron Institute Report. Estimated Excess Morbidity and Mortality Caused by Air Pollution above American Thoracic Society-Recommended Standards, 2011-2013. (2016) Annals of the American Thoracic Society. 2016:13(8):1195-1201.
d. M Rice, T Guidotti, and **K Cromar**. Scientific Evidence Supports Stronger Limits on Ozone. American Journal of Respiratory and Critical Care Medicine (AJRCCM). (2015) 2015-03-31; 1535-4970.
e. **Cromar K**. and Schwartz J. More residual risks: an update on New York City boilers. Policy Brief. Institute for Policy Integrity. New York, NY (2010). (http://policyintegrity.org/files/publications/More_Residual_Risks.pdf)
f. Thurston GD, Kipen H, Annesi-Maesano I, Balmes J, Brook R, **Cromar K**, De Matteis S, Forastiere F, Forsberg B, Frampton M, Grigg J, Heederik D, Kelly F, Kuenzli N, Laumbach R, Peters A, Rajagopalan S, Rich D, Ritz B, Samet J, Sandstrom T, Sigsgaard T, Sunyer J, and B Brunekreef. A joint ERS/ATS policy statement: what constitutes an adverse health effect of air pollution? An analytical framework. (2017) Eur Respir J 2017; 49:1600419.

*indicates student or trainee in Dr. Cromar's lab.