

Indoor Air Pollution From Solid Fuels and Lung Cancer Risks in Low Income Countries

Amir Sapkota^{*}, University of Maryland

Abstract

Of the 1.3 million cases of lung cancer estimated to occur each year worldwide, 672,000 cases occur in low and middle income countries (LMCs), yet the majority of the studies on cancer and cost utility analysis (CUA) have been conducted in high income countries. Cancer is already a major burden in LMCs, and the burden is expected to increase in the next decades. These countries are characterized by very high prevalence of exposure to indoor air pollution from solid fuels, which contains numerous established human carcinogens (IARC Group 1 carcinogens) such as 1,3-butadiene, benzo(a)pyrene and formaldehyde. In this presentation, we describe results from ongoing hospital based case-control study of lung cancer in Nepal, one of the poorest countries in the world. Lung cancer risk estimates based on different surrogate measure of exposure will be compared to biomarker based exposure assessments, using urinary metabolite of 1,3-butadiene (monohydroxybutyl mercapturic acid (MHBMA) and dihydroxybutyl mercapturic acid (DHBMA)) as an example.

* Presenting author