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Air pollution: The biggest environmental health risk

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Abstract
Air pollution is a major environmental risk to health. By reducing air pollution levels, countries can reduce the burden of disease from stroke, heart disease, lung cancer, and both chronic and acute respiratory diseases, including asthma. According to the new estimates around 7 million people died - one in eight of total global deaths – as a result of air pollution exposure. This finding more than doubles previous estimates and confirms that air pollution is now the world's largest single environmental health risk and reducing air pollution could save millions of lives.

Keywords: air pollution, ambient, household, health.

1. Introduction
Air pollution is contamination of the indoor or outdoor environment by any chemical, physical or biological agent that modifies the natural characteristics of the atmosphere. Household combustion devices, motor vehicles, industrial facilities and forest fires are common sources of air pollution. Pollutants of major public health concern include particulate matter, carbon monoxide, ozone, nitrogen dioxide and sulfur dioxide. Outdoor and indoor air pollution cause respiratory and other diseases, which can be fatal [1].

2. Effects of Air pollution
According to the recent estimates released by the World Health Organization (WHO), there were 7 million deaths in the year 2012 globally, as a result of exposure to air pollution. This finding proves that air pollution is the world's largest single environmental health risk as of now. These data also reveal a stronger link between exposure to air pollution and cardiovascular diseases, such as stroke and is chaemic heart disease, as well as between air pollution and cancer. This is in addition to air pollution's role in the development of respiratory diseases, including acute respiratory infections and chronic obstructive pulmonary diseases [2].

Region wise distribution
The Western Pacific and South East Asian regions bear most of the burden with 2.8 and 2.3 million deaths, respectively. Almost 680000 deaths occur in Africa, about 400000 in the Eastern Mediterranean region, 287000 in Europe and 131000 in the Americas. The remaining deaths occur in high-income countries of Europe (295000), Americas (96000), Western Pacific (68000), and Eastern Mediterranean (14000) [3].

3. Ambient Air Pollution
Globally, 3.7 million deaths were attributable to ambient air pollution (AAP) in 2012. About 88% of these deaths occur in low- and middle-income (LMI) countries, which represent 82% of the world population. Outdoor air pollution is a major environmental health problem affecting everyone in developed and developing countries alike. WHO estimates that some 80% of outdoor air pollution-related premature deaths were due to ischaemic heart disease and stroke, while 14% of deaths were due to chronic obstructive pulmonary disease or acute lower respiratory infections; and 6% of deaths were due to lung cancer [4].

4. Household Air Pollution:
Globally, 4.3 million deaths were attributable to household air pollution (HAP) in 2012, almost all in LMI countries. The South East Asian and Western Pacific regions bear most of the burden with 1.69 and 1.62 million deaths, respectively. Among these deaths 12% were due to pneumonia, while 34% were due to stroke, 26% died from ischaemic heart disease, 22% from chronic obstructive pulmonary disease (COPD) and 6% from lung cancer. There is also evidence of links between household air pollution and low birth weight, tuberculosis, cataract, nasopharyngeal and laryngeal cancers [5].

5. Conclusion
Often, the biggest air-pollution related burden to health is observed in developing countries, which are already struggling with various problems of poverty and social deprivation.
In many developing countries, consideration of pollution emissions in urban planning, domestic heating, energy production and transport development is still not a common practice. The ignorance of health effects of the pollution or under appreciation of its magnitude are big obstacles in defining the actions and mobilizing local and international resources. At the same time, relatively simple interventions, such as an improvement in kitchen stoves or heating appliances, may reduce exposure of people to the pollution radically, producing significant health gain at minimal cost [6].

6. References
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