



INDIAN COUNCIL OF MEDICAL RESEARCH

Department of Health Research - Ministry of Health & Family Welfare
Government of India

First comprehensive estimates of the impact of air pollution on health loss and life expectancy reduction in each state of India

Findings reported would serve as a useful guide for making further progress in reducing the adverse impact of air pollution: DG ICMR

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The first comprehensive estimates of deaths, disease burden, and life expectancy reduction associated with air pollution in each state of India published by the **India State-Level Disease Burden Initiative** today report that India with 18% of the global population has a disproportionately high percentage of the global premature deaths and disease burden due to air pollution. The India State-Level Disease Burden Initiative is a joint initiative of the Indian Council of Medical Research (ICMR), Public Health Foundation of India (PHFI), and Institute for Health Metrics and Evaluation (IHME) in collaboration with the Ministry of Health and Family Welfare, Government of India, along with experts and stakeholders associated with over 100 Indian institutions. These research findings published in *The Lancet Planetary Health* were released today at ICMR.

On the release of these findings, **Prof. Balram Bhargava**, Secretary to the Government of India, Department of Health Research, Ministry of Health & Family Welfare, and Director General, ICMR, said “It is important to have robust estimates of the health impact of air pollution in every state of India in order to have a reference for improving the situation. There is increasing political momentum in India to address air pollution. The findings reported today systematically document the variations among states, which would serve as a useful guide for making further progress in reducing the adverse impact of air pollution in the country.”

Highlighting the need for collaboration in addressing air pollution, **Dr. S. Venkatesh**, Director General of Health Services, Ministry of Health and Family Welfare, Government of India, said, “The National Health Policy 2017 has listed exposure to air pollution as a significant risk factor, and calls for convergence between sectors to reduce the growing burden of chronic diseases in the country that are often related to air pollution. We are undertaking a number of initiatives for experts to convene in order to develop strategies that would increase awareness among communities on what each one of us could do to reduce the adverse impact of air pollution on health, which would benefit from the state-specific findings reported by this study.”

Dr. Tushar K. Joshi, Advisor Environmental Health, Ministry of Environment, Forest and Climate Change, Government of India, said, “Initiatives across many sectors are being undertaken in India to reduce air pollution, including adoption of renewable energy and cleaner fuels, enhancing public transport options, encouraging intelligent waste management, and adoption of recycling environmentally friendly options. These state-specific findings on the health impact of air pollution would help fine tune the air pollution control efforts across the country. The Ministry of Environment, Forest and Climate Change is fostering greater public engagement for environmental sustainability through simple individual actions by performing Green Good Deeds.”

“There has been increasing consensus in recent public and policy debates in India on the need to address the adverse health impact of air pollution” said the senior author of this study, **Prof. Lalit Dandona**, Research Professor, PHFI, and Director, India State-Level Disease Burden Initiative. “The findings in this paper that one out of every eight deaths in India can be attributed to air pollution, and that air pollution is now responsible for more disease burden in India than tobacco use, would help increase the momentum further for control of air pollution. Eom

Key findings from the paper:

- First comprehensive estimates of deaths, disease burden, and life expectancy reduction associated with air pollution in each state of India.
- One in eight deaths in India was attributable to air pollution in India in 2017, making it a leading risk factor for death in India.
- There were 6.7 lakh deaths due to outdoor particulate matter air pollution and 4.8 lakh deaths due to household air pollution.
- Over half of the deaths due to air pollution were in persons less than 70 years of age.
- With 18% of the global population, India suffered 26% of premature mortality and health loss attributable to air pollution globally.
- In 2017, 77% population of India was exposed to ambient particulate matter PM_{2.5} above 40 µg/m³, the recommended limit by the National Ambient Air Quality Standards.
- The mean ambient particulate matter PM_{2.5} annual exposure of 90 µg/m³ in India in 2017 was one of the highest in the world. The highest PM_{2.5} exposure level was in Delhi, followed by the other north Indian states of Uttar Pradesh, Bihar and Haryana.
- While the proportion of households using solid fuels has been improving in India, 56% of the population still used solid fuels in 2017; this proportion was higher in the less developed states with over two-thirds of the population in most EAG states using solid fuels for cooking.
- The DALY rates due to household air pollution varied 145-fold among the states of India in 2017, and it varied 6-fold for outdoor particulate matter air pollution.
- The DALYs attributable to air pollution in India in 2017 for major non-communicable diseases, which included chronic obstructive lung disease, ischemic heart disease, stroke, diabetes and lung cancer, were at least as high as those attributable to tobacco use.

- The average life expectancy in India would have been 1.7 years higher if the air pollution level were less than the minimal level causing health loss, with the highest increases in the northern states of Rajasthan (2.5 years), Uttar Pradesh (2.2 years), and Haryana (2.1 years).
- Increasing public and policy attention to the control of air pollution in India is encouraging, which needs to be sustained for effective interventions. The Pradhan Mantri Ujjwala Yojana launched in May 2016 has achieved its target of distributing LPG to 50 million poor households in August 2018, the target that was originally set for March 2019. The target has now been increased to reach 80 million households through this scheme.
- Systematic and sustained efforts are needed to address the variety of sources contributing to air pollution, which include transport vehicles, construction activity, industry and thermal power emissions, residential and commercial solid fuel use, waste and agriculture burning, diesel generators, and manual road dust sweeping.
- Variations between the states in the exposure to outdoor and indoor air pollution should be taken into account while planning policies and interventions to reduce this exposure and its health impact.

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