

THE INDIA HEALTH INFORMATICS PROJECT

**REPORT V: Air Pollution & Adverse Health
Effects in India**

JUNE 5 2019

Authored by: Dr. Rohan D'Souza

Company: MedTive

Executive Summary

Democratizing Health Informatics in India

If you work in healthcare, you would know how difficult it is to source reliable data. Whether you're a student working on a project or a thesis, or a clinician or a researcher working on a manuscript or even a Marketer or industry professional exploring market opportunities. This is a problem we have faced inextricably over the years. Data in India exists in silos across the web and tends to get lost in clunky websites making it close to impossible to dig out. My objective is to put together these various databases and create a [centralized go-to healthcare repository](#). This is the first of a series of documents. In essence, I hope to socialise the platforms we have used for secondary research in the past, in the hope that it eases the access to data for anyone working in healthcare.

Air pollution is a major and growing risk factor for ill health in India, contributing significantly to the country's burden of disease. As per the Global Burden of Disease comparative risk assessment for 2015, air pollution exposure contributes to approximately 1.8 million premature deaths and 49 million disability adjusted life-years (DALYs) lost, ranking it among the top risk factors for ill health in India. Home to 10 of the top 20 cities with the highest annual average levels of PM2.5 as per the WHO Urban Ambient Air Quality Database 2016 and with several studies showing a worsening trend over time, it is safe to say that rapid urbanization and industrial development have adversely affected urban air quality due to vehicular and industrial emissions. Simultaneously, a significant number of rural Indians caught in the 'chulha trap' use biomass fuels such as wood, dung or coal to satisfy their cooking and heating needs, resulting in smoke-filled homes and extremely high levels of exposure especially to women and children.

This report covers the various sources of data and statistics highlighting the adverse health effects of air pollution in India. I hope you find this useful!

-Rohan D'Souza



About The Author

Rohan D'Souza is a clinician trained at St. John's National Academy of Health Sciences, Bangalore. He has encapsulated varied experiences across healthcare in Clinical Medicine, Unmet Need Research, Pharmaceuticals, Medical Devices, InsureTech and Health Policy with organizations such as Pfizer, The Lemelson Foundation and InnAccel Technologies, Fedo.AI and YLAC. He is the co-Founder of Medtive. He nurtures an ambition to integrate these experiences and transform

healthcare by enabling access to value-based care, at the intersection of Medicine and Technology in India. He is an incoming dual degree candidate, MBA & Masters in Public Health, at the UC Berkeley Haas School of Business and Berkeley School of Public Health (2019-2021).

[My Website](#) | [LinkedIn](#) | [TEDx Talk](#) | [ResearchGate](#) | [Unmet MedTech Needs Database](#) | [Medtive](#)

	Name of Report(s)	Source & Link
1	The Rising Cost of Ambient Air Pollution thus far in the 21st Century: Results from the BRIICS and the OECD Countries 2017	OECD Library
2	WHO Global Ambient Air Quality Database (update 2018)	WHO
3	Global platform on air quality and health	WHO
4	Ambient air pollution: a global assessment of exposure and burden of disease	WHO
5	Global Ambient Air Pollution	WHO
6	Global Health Observatory (GHO) data	WHO
7	Country profiles of Environmental Burden of Disease - India	WHO
8	The impact of air pollution on deaths, disease burden, and life expectancy across the states of India: the Global Burden of Disease Study 2017	Lancet
9	Health Impacts of Air Pollution - A list of Studies from India	UCMS
10	Air pollution health research priorities for India: Perspectives of the Indo-U.S. Communities of Researchers	Environment International
11	Air-pocalypse - Assessment of Pollution in Indian Cities	Greenpeace
12	The Solvable Challenge of Air Pollution in India	National Council of Applied Economic Research
13	Pollutions Impact in India	EPIC
14	Air Quality Life Index	EPIC
15	Burden of Disease Attributable to Major Air Pollution Sources in India	Health Effects Institute
16	Ambient Air Quality Database Application	WHO
17	Varanasi Chokes	Care For Air & India Spend
18	Burden of disease from the joint effects of household and ambient Air pollution for 2016	WHO
19	Explaining Death Rates from Air Pollution	Our world in Data
20	Countries of middle-income tend to have higher death rates from outdoor air pollution	Our world in Data
21	Estimates and 25-year trends of the global burden of disease attributable to ambient air pollution: an analysis of data from the Global Burden of Diseases Study 2015	Lancet
22	Lower Pollution, Longer Lives. Life Expectancy Gains if India Reduced Particulate Matter Pollution	EPIC
23	Health Impact of Pollution by City	BreatheLife
24	Public health, environmental and social determinants of health (PHE)	WHO

25	List of Government Policies, Programs and Schemes	Ministry of Environment, Forest and Climate Change
26	Characteristics of the Ozone pollution and its Health Effects in India - 2017	International Journal of Medical Public Health
27	Premature mortality in India due to PM2.5 and ozone exposure	Geophysical Research Letters
28	Environmental Performance Index - India	Yale University, Columbia University, World Economic Forum
29	The economic consequences of outdoor air pollution	OECD Library
30	Burden of Disease in India	Institute for Health Metrics and Evaluation
31	Catalogue of resources for Air pollution in India	Care For Air
32	Nations within a nation: variations in epidemiological transition across the states of India, 1990–2016 in the Global Burden of Disease Study	Lancet
33	Air Pollution and Health in India	Centre for Environmental Health
34	Tackling the health burden of air pollution in South Asia - 2017	BMJ
35	Lancet Countdown 2018 Report: Briefing for Indian Policymakers November 2018	Lancet
36	Publications by the Chintan Group	Chintan Environmental Research and Action Group
37	Death in Every Breath	Lung Care Foundation
38	Air pollution report card - 2018	Centre for Science and Environment
39	Air Pollution and Human Health in Kolkata, India: A Case Study	MDPI
40	Air Pollution and its Effects on Health – Case Studies, India	Chittaranjan National Cancer Institute, Kolkata
41	The Health Effects of Air Pollution in Delhi, India	World Bank
42	Epidemiological Study on Effect of Air Pollution on Human Health (Adults) in Delhi 2012	Central Pollution Control Board
43	Health Impacts of Air Pollution 2018	SCOR
44	Early Life Exposure to Outdoor Air Pollution: Effect on Child Health in India	Brookings

45	Exposure to indoor air pollution and its perceived impact on health of women and their children: A household survey in a slum of Kolkata, India	Indian Journal of Public Health
46	State of Global Air 2019 Report	Health Effects Institute
47	Air Pollution and Child Health in Urban India	Institute for Studies in Industrial Development
48	Health Benefits of Air Pollution Abatement Policy (Published 2015)	Journal of Air and Waste Management

[Explore more of our Reports in the India Health Informatics Project Repository](#)

Disclaimer: *To the best of our knowledge, all information included here falls under the fair use or public domain guidelines of copyright law. We strive for accuracy but cannot be held responsible for any errors in information featured in the document or incorrect attributions. The author does not represent or warrant that the information on this site is complete or current and while reasonable effort has been taken to include accurate and up to date information in the document, neither the author nor Medtivity makes any warranties or representations as to its accuracy. The author assumes no liability or responsibility for any errors or omissions in the content of the mentioned site. The quotes, articles, news and views are not necessarily representative of the views of the author. The author takes no responsibility for filtering content based on any standards of morality, religion, or politics.*