

AIR POLLUTION AND PNEUMONIA SCORECARD

MAIN FINDINGS

Air pollution contributed to 30% (651,200) of all pneumonia deaths in 2021; 55% (360,600) from household and 45% (290,600) from outdoor sources

30% (201,100) of all air pollutionrelated pneumonia deaths are among children under five years; 70% (142,900) from household air pollution

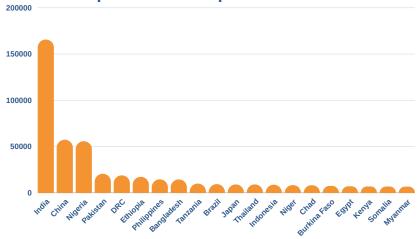
42% (273,900) of air pollutionrelated pneumonia deaths are among adults over 70 years; 58% (157,700) from outdoor air pollution

20 countries are home to 70% (462,700) of all air pollution-related pneumonia deaths, 10 in Africa, 9 in Asia, and 1 in Latin America

Children across Africa and older adults across Asia are the most adversely affected by air pollution-related pneumonia

Visit:
https://stoppneumonia.org
/issues/prevent/

20 countries with the largest numbers of air pollution-related pneumonia deaths



Source: Global Burden of Disease 2021

Air pollution is the major risk factor for death from pneumonia and contributed to an estimated 651,200 (30%) of all pneumonia deaths in 2021, according to the Global Burden of Disease.

Household and outdoor air pollution contribute almost equally to air pollution-related pneumonia deaths, however household sources disproportionately harm children while outdoor sources disproportionately harm older adults.

Across Africa, 50% of all air pollution-related pneumonia deaths are among children, with 75% caused by household sources, while across Asia, older adults are disproportionately harmed by outdoor air pollution.

Air pollution-related pneumonia deaths are concentrated in 20 countries, including 10 in Africa, nine in Asia, and one in Latin America.

It is critical that these governments introduce policies to reduce the major causes of air pollutionrelated pneumonia deaths, prioritizing their most vulnerable populations.

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CALL TO ACTION

Governments should:

- 1. Set a national target to reduce air pollutionrelated pneumonia deaths by 50% by 2030
- 2. Introduce new measures to achieve the target including by:
 - 1. Increasing the proportion of households with access to clean cooking fuels and technologies to above 70%
 - 2. Reducing average PM2.5 exposure by 50% until achievement of the updated WHO targets of not more than 5µg/m3 per year and 15 µg/m3 for more than three days per year
 - 3. Establishing a multi-sector, multi-government Clean Air Taskforce with representation from the health, energy, agriculture, industry, and urban development ministries at national, state, and local government levels
- 3. Publish progress to the target as part of national health strategies using Global Burden of Disease data

Note countries should target the leading causes of air pollution-related pneumonia deaths - household, outdoor, or both depending on local risk factor and burden of disease analysis

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Photo by World Bank, Prabir Mallik

AIR POLLUTION AND HEALTH GOALS, TARGETS, AND INDICATORS

Sustainable Development Goals 2030



- 3.2.1 Reduce child (0-4 yrs) deaths to at least 25 per 1,000 births
- 3.9.1 Reduce % of adult(15+ vrs) deaths attributable to PM2.5 air pollution



7.1.2 Increase % population with access to clean fuels and technologies for cooking to 100%



11.6.2 Reduce annual mean levels of fine particulate matter (PM2.5 and PM10) in cities (population weighted)

DEFINITIONS

Global Burden of Disease uses clinician-diagnosed pneumonia or bronchiolitis as the case definition for Lower Respiratory Infection (LRI) with major causes Streptococcus pneumor Haemophilus influenzae type b, respiratory syncytial virus (RSV), and influenza

AIR POLLUTION

Presence of toxic chemicals or compounds (including those of biological origin) in the air at levels that pose a health risk

HOUSEHOLD AIR POLLUTION

Array of pollutants including fine particulate matter (PM2.5), black carbon, and carbon monoxide that results from household burning of coal, charcoal, wood, agricultural residue, animal dung, and kerosene for indoor heating or cooking using open fires or cookstoves

OUTDOOR (AMBIENT) AIR POLLUTION

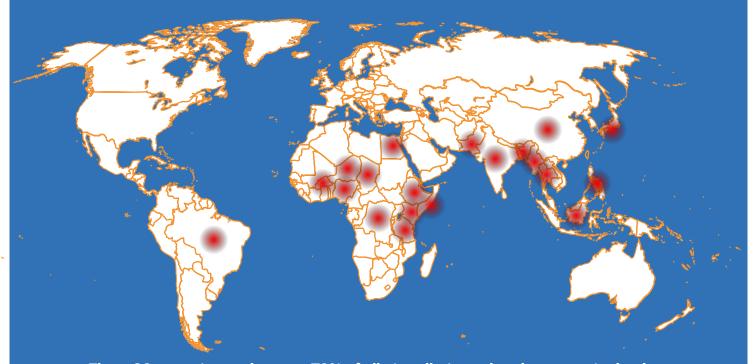
Array of pollutants that result from natural and human causes including vehicle fuel combustion, heat and power generation, industrial facilities, and agricultural waste

Particulate matter measuring less than 2.5 micrometers in diameter (i.e., less than a 30th of the diameter of a human hair), emitted from vehicles, coal-burning power plants, industrial activities, waste burning, and many other human and natural sources, measured in concentration of an air pollutant in micrograms (one-millionth of a gram) per cubic meter of air

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COUNTRY	NUMBER PNEUMONIA DEATHS ATTRIBUTABLE TO AIR POLLUTION	% ALL DEATHS AMONG CHILDREN <5 YRS	% ALL DEATHS AMONG ADULTS 70+	% ATTRIBUTABLE TO HOUSEHOLD AIR POLLUTION
INDIA	165,700	27%	44%	60%
CHINA	57,400	5%	80%	19%
NIGERIA	55,800	73%	12%	65%
PAKISTAN	20,600	69%	15%	65%
DRC	18,900	25%	29%	92%
ETHIOPIA	17,300	36%	33%	91%
PHILIPPINES	14,600	12%	56%	60%
BANGLADESH	14,500	30%	43%	82%
TANZANIA	10,000	42%	28%	90%
BRAZIL	9,400	2%	68%	14%
JAPAN	9,080	<1%	95%	<1%
THAILAND	9,080	1%	74%	6%
INDONESIA	8,800	21%	46%	41%
NIGER	8,300	66%	15%	84%
CHAD	8,200	71%	12%	82%
BURKINA FASO	7,500	59%	20%	83%
EGYPT	7,090	29%	33%	<1%
KENYA	6,900	22%	39%	88%
SOMALIA	6,840	58%	11%	94%
MYANMAR	6,700	34%	38%	70%

20 HOTSPOTS FOR AIR POLLUTION-RELATED PNEUMONIA DEATHS



These 20 countries are home to 70% of all air pollution-related pneumonia deaths according to the Global Burden of Disease, 2021