

Breathless? Know the costs of rising air pollution in cities

Air purifiers, nebulizers and N-95 masks are now a way of life, as are visits to pulmonologists

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Most people look forward to celebrating the joyous occasion of Diwali, the festival of lights. But many residents of the National Capital Region have begun to dread the festive season. And, for a reason. That is the season when they have their eyes glued to the air quality index (AQI), as farm fires continue to burn bright in the neighbouring states when farmers set fire to the crop stubble. Add to this the pollution caused by bursting of firecrackers and the air quality gushes into the hazardous category. And you then see a steady line of people flocking to hospitals due to breathing problems.

The Capital city has been battling air pollution for a long time now, with even the Supreme Court weighing in on the remedial measures taken by the government. But, there seems to be little respite. Complaints of breathlessness, severe wheezing, lung infection and chest congestion are on the rise. Sonia Suri (53), a resident of Mayur Vihar in New Delhi, vividly remembers the day she had to be hospitalized. In 2018, she suffered an unusually long bout of uncontrollable coughing. She consulted a pulmonologist who used a spirometer to monitor her breathing. The spirometer is a medical device that measures how much air one can breathe in and out. "I was not able to breathe. My nails were turning blue. The doctor admitted me to the ICU (intensive care unit) right then and put me on treatment for lung infection. I could have died, he told us later," says Suri, who now wears a N-95 mask all the time. An N95 respirator is a personal protective equipment (PPE) device designed to filter out at least 95% of airborne particles, including small particles and large droplets.

Suri, who resided near the infamous Gazipur landfill in Mayur Vihar, was asked by her doctor to shift residence to another place. "The doctor suggested that I relocate. I did that but it wasn't of much help either because entire Delhi is polluted. Every year when the air quality turns worse from October onwards, I get sick and am put on steroids," she says. Steroids are medications to treat a variety of inflammatory conditions, such as asthma.

Suri is not off the mark when she says that entire Delhi is polluted. The Capital is indeed one of the most polluted city with the worst air quality index (AQI) levels. Data from Central Pollution Control Board (compiled by Respirometer Living Sciences, a climate-tech start-up) shows Delhi's average AQI level in terms of PM2.5 hit 252.7, as on November 15. It was 106.2 in October. A level below 50 is considered safe. It was less than 50 only for Bengaluru, Chennai and Hyderabad among 11 major cities (see graphic). Bhopal, Chandigarh and Pune were among the cities where pollution levels were high. A Reuters report on 13 November said two Indian cities, Mumbai and Kolkata, joined New Delhi among the world's top 10 most polluted cities the day after Diwali. PM is short for particulate matter, tiny particles that hang in the air and can cause breathing troubles when inhaled.

The worsening air quality has implications—dire consequences for people facing respiratory issues, say experts. Not only do they have to bear medical expenses but also make drastic changes in the way they live, work or stay. "Just

Breathing fresh air a luxury not available to many

The air quality index is turning worse across India, with many people suffering from respiratory issues; understand the costs involved

SONIA SURI (53)

Place: New Delhi
Profession: Teacher

Chronic lung infection

- Spends ₹9,000 each month on medicines, doctors
- ₹30,000 each year on medical tests

RAVINDRA REDDY (52)

Place: Pune
Profession: Sales professional

Allergic bronchopulmonary aspergillosis

- Spends ₹6,000 each month on medicines
- ₹4,000 every other month to visit ENT

PRANAV MEHTA (33)

Place: Gurgaon
Profession: Data science professional

Restrained respiratory system

- Stopped visiting doctors for it hardly helped
- Takes anti-allergic medicines and uses air-purifier at home

as water purifiers have become a norm in houses, air purifiers too are becoming quite common," says Ronak Sutaria, founder & CEO, Respirometer Living Sciences.

Air purifiers, though, are just a minor expense in the battle against pollution. There are significant costs involved in respiratory disease management. But, is it covered under insurance? And, how does one get protection against it—medically and financially? Read on.

Breathing bad

Pune-based Ravindra Jakareddy (52) suffers from allergic bronchopulmonary aspergillosis, caused by allergies to dust and smog. He has to take steroids every day. "When the season changes or when I travel to cities where AQI levels are higher, the situation aggravates and it results in an asthma attack. I take additional steroids then," he says. Moreover, the condition affects his eardrums leading to partial deafness. "Allergies develop due to dust particles and causes blockage in the ear. I have to visit an ENT (ear, nose, and throat) specialist every other month to get my eardrums cleaned," he says.

Jakareddy spends around ₹4,000-6,000 every month on medicines and an additional ₹4,000 when he visits the ENT doctor.

Suri of Mayur Vihar spends more—about ₹10,000 each month between October and March. "My medicines



PM2.5 levels in 11 major cities for Oct and Nov 2022 and 2023

City	Population (mn)	Oct		Nov	
		2022	2023	2022	2023*
Ahmedabad	7.2	51	57	78	70
Bhopal	2.3	65	58	110	116
Bengaluru	9.6	39	38	44	41
Chandigarh	1.05	50	54	83	83
Chennai	6.7	38	31	36	35
Delhi	16.7	110	106	180	241
Gandhinagar	1.3	42	40	45	56
Hyderabad	3.9	33	40	50	43
Kolkata	4.5	33	52	88	73
Mumbai	12.4	40	65	73	63
Pune	9.4	52	69	17**	79**

*PM2.5 data for 2023 is till 21 November. Monitors recorded data for 0-100% of the time.
**In 2022, only one monitor in Pune city was recording data, whereas in 2023 that number went up to 8.
Source: Central Pollution Control Board; Census 2011; Data analysis: Respirometer Reports

Out-of-pocket expenses

- ₹10,000-12,000 each month on medicines, doctor consultations
- One-time cost of a decent air-purifier more than ₹10,000
- ₹4,000 recurring cost of replacing filters in air-purifiers
- Big families need air-purifiers for each room
- Masks, nebulizers and in some case oxygen bags are needed
- Pulmonary tests: around ₹2,000

The insurance angle

- IPD* expenses for respiratory diseases are covered
- Take add-on OPD** cover from insurers or healthcare/wellness companies
- Fresh policy issuance may involve loading in premium
- Waiting period needs to be served for existing respiratory disorders

*In-patient department; **Out-patient department

Many people suffer from lung diseases due to air pollution; the cost of treating these is significant

cost me ₹5,000 every month and I have to shell out an additional ₹2,500 each time I visit a doctor, which could be once or twice monthly. I also have to spend about ₹30,000 per year on X-Rays, CT scans and other medical tests," says Suri.

According to Sutaria, on an average, a patient may have to spend about ₹10,000-12,000 each month, excluding the one-time cost of nebulizers and air-purifiers. "You need more than one nebulizer if other family members also suffer from respiratory issues. Also,

buying one air-purifier does not help. You need it for each of the bedrooms. Besides, one has to replace air-purifier filters once or twice in a year," he says.

Gurgaon-based Pranav Mehta (33), for example, keeps his air-purifier switched on the whole day. He bought a big air-purifier for ₹18,000 and spends about ₹4,000 each year to replace the filters. "Power bills keep shooting up," he says.

Insurance protection

Typically, health insurance policies get activated when a policyholder is hospitalized for 24 hours or more. Initial doctor consultations, medicines or pulmonary tests are part of out-patient department (OPD) expenses. These are not covered in basic insurance policies. Some insurance companies have started offering an in-built or add-on OPD cover, but the coverage is not exhaustive. It is usually a small percentage of the

sum-insured and could just be a couple of thousand rupees for the entire year.

Kalpesh Chavan, senior vice president & product head, Alliance Insurance Brokers, says it is better to opt for a high-sum insured policy so that the OPD component is bigger. "Alternatively, there are wellness companies offering specific OPD expenses coverage that can go up to lakhs of rupees," he says. Even Healthcare, Practo and Alive Healthcare are a few companies offering this option.

To be sure, if you get hospitalized due to any lung-related disease, your existing health insurance policy will cover it. There are no specific exclusions for chronic obstructive pulmonary disease, or COPD—a group of diseases that cause airflow blockage and breathing-related problems. "COPD treatment can cost anywhere between ₹2 lakh and ₹2.5 lakh. A customer diagnosed with lung cancer, however, may have to spend at least ₹10 lakh. As much as 75-80% hospitalization for respiratory disorders is due to COPD," says Chavan.

As for buying a fresh policy, while there is no region-specific underwriting, but those already suffering from asthma or bronchitis may have to pay an extra premium. "An existing insurance policy covers all this. But if you were to need a fresh policy, you may have to serve a waiting period for your existing respiratory disorders," says Amit Chhabra, chief business officer, PolicyBazaar.com.

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