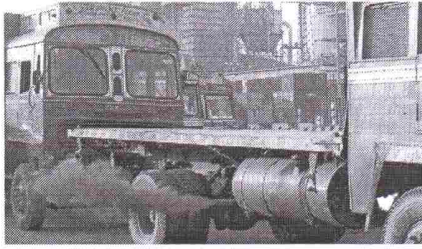


Delhi most polluted Indian city, neck-to-neck with Beijing

Published: Wednesday, 01 April 2015 18:49



TRANS ASIA NEWS

NEW DELHI: Delhi has been the top contender in the contest to be the world's most polluted capital running neck-to-neck with the Chinese capital- Beijing. Its huge reliance on fossil fuels has transformed Delhi into one of the planet's most polluted cities and made India the third biggest national emitter of greenhouse gases. Its the harmful fine Particulate Matter (PM 2.5)- small enough to get stuck in your lungs, that has caused an unprecedented spike in respiratory and other diseases in residents, most of who are being advised by doctors simply to leave Delhi as a solution. Even Chief Minister Arvind Kejriwal became a victim, forced to go for a detoxification programme at the Jindal Institute of Naturecure in Bangalore last month.

The evidence is overwhelming. The killer dust in Delhi's air, RSPM (respirable suspended particulate matter), has led to an unprecedented rise in the number of patients seeking help for breathing-related problems at Delhi's main health facilities. Whereas the number of OPD cases at the Vallabhbhai Patel Chest Institute (VPCI) and All India Institute of Medical Sciences (AIIMS) had significantly declined when public transport vehicles switched to the cleaner CNG fuel, seven years ago, all those gains have now been lost. The situation today has worsened hugely, setting the clock back. A spike in the RSPM levels from 161 $\mu\text{g}/\text{m}^3$ (microgram per cubic metre) in 2007 to 316 $\mu\text{g}/\text{m}^3$ in 2014 has meant that at VPCI, the number of OPD cases that had dipped from 51,694 in 2003-04 to 47,887 in 2006-07 have risen to reach an all-time high of 65,122 cases in 2013-14.

Likewise, AIIMS is following a similar trend. From 10,296 OPD cases of respiratory ailments in 2005-06 to a low of 9,519 in 2007-08, the cases reportedly hit an all-time high of 37,669 in 2014-15. The particulate matter in New Delhi reportedly stands at 2.5 micrometers, which is almost 5 times the normal size recommended for urban cities. It comprises of solid particles such as dust, vehicle and industrial combustion and liquid droplets such as acids and organic chemicals as well. Anything between 2.5 mm and 10 mm is small enough to enter the lungs and cause serious damage. AIIMS in fact started a separate respiratory department in 2013. Admitting that these numbers are cause for serious alarm, Dr Randeep Guleria, head of respiratory medicine, AIIMS, told The Indian Express: "What is most worrying is that 10-15 years ago, when air pollution levels had come down, our average OPD attendance and admissions in respiratory medicine at AIIMS saw about a 20% decline. We seem to have lost out on our own achievements. As pollution levels have gone up, our public health success has been reversed."

At the receiving end, are people like Jamil, a driver from East Delhi. Doctors at Lady Harding Medical College advised Jamil to leave Delhi if he wanted to save his family. He lost his newborn son to pneumonia five years ago in December. "Last November, about a week after Diwali, my four-year-old daughter started coughing and wheezing. It was the same cough. My wife and I can never forget the sound or sight of our girl struggling to breathe. Within days, our third child, a newborn daughter got the same cough," he said.

Both the girls recovered but Jamil said he will never forget those days or the advice that the doctors gave him. "They said I should send my daughters to my village, near Gorakhpur, every year after November because it gets difficult in Delhi at that time," he said. Meera, a resident of Gurgaon, said that her eight-year-old son has "never had a free childhood". "He has given up on activities like swimming and skating which he loved. He avoids dust. Even if he climbs a fleet of stairs, he feels tired. Every year, his condition worsens after Holi in April, and after Diwali around November. Doctors told me that both correspond to an increase in pollution levels," she said. Juhi, a chartered accountant from South Delhi, said that doctors have clearly linked the "respiratory problems" of her 11-year-old daughter to air pollution.

"My daughter is an asthmatic. From the age of 5-6 years she has been on medicines like anti-allergens, and even now I always carry a nebuliser. She was hospitalised 3-4 times earlier from asthmatic attacks, when she missed school. Doctors have told me pollution is a factor in her respiratory problems," she said.

Dr Rahul Nagpal, paediatric chest specialist at Fortis VK, said, "I have lost count of the medical certificates I have written for schoolchildren this winter. As a doctor, I am often forced to advise holidays to patients because a change of environment with better air quality helps them improve faster." What's needed, says Dr Guleria, is action at the policy level. "The poor air quality has persisted for too long, and there is enough evidence of its link to health effects. It is time that we see some policy action to not only control this but also ensure that we hold on to any success we achieve this time," he said. Data confirms that the the air we breathe is most dangerous around the start of winter- from October to December. That's when the cold air creates low pressure conditions that prevent pollutants in the air from dispersing, leading to episodes of smog and fog. The numbers show that patient numbers during this period have been sharply rising over the last three years.

Dr Rajendra Prasad, director, VPCI, said that this is the time "when we see more of patients with chronic or long-term respiratory diseases like Asthma and Bronchitis having complications". Data from the institute shows that the number of patients admitted in its respiratory wards increased by 79%- from 2,160 cases in 2003-04 to 3,873 in 2013-14. "The admissions and emergency cases are reflective of such exacerbation in symptoms. So in our experience as a tertiary care hospital, which sees more referrals of complicated cases, air pollution not only causes respiratory symptoms but also exacerbates underlying respiratory diseases," Dr Prasad said.

According to Prof S K Chhabra, head of cardiorespiratory physiology, VPCI, "Evidence clearly shows that both acute respiratory and chronic respiratory problems as well as all-cause and respiratory mortality are associated with worsening air pollution. Evidence has accumulated to show that particulate air pollution is also linked to cardiovascular morbidity (angina, myocardial infarction, heart failure) and mortality." The doctors said that in very serious cases, they almost always remind the patient of the option to move out of Delhi.

Dr Arup Basu, director of chest medicine at Sir Ganga Ram Hospital said that it's not just respiratory diseases that are triggered by Delhi's dirty air. "There is a direct co-relation not only between pollutant levels and respiratory diseases, but also with cerebrovascular problems, blood pressure levels and even cardiac events." "When our respiratory attendance spiked this November-December, we convened a meeting of all consultants and analysed the data. We realised that while earlier only upper respiratory complications such as cough phlegm, and breathing difficulties were common, now more patients complain of serious lower respiratory problems indicating that pollution has entered the lungs."

Dr Basu also urged the government to take "scientific measures" to resolve the crisis. "We do not need another winter like the one we saw with so many patients, especially children and the elderly, falling so sick and taking longer to recover. We need the government to take scientific measures to prepare an action plan to prevent what has become like an annual cycle," he added. India's Environment Minister Prakash Javadekar has made it clear Arvind Kejriwal's Delhi government will have to find a solution to the crisis, while assuring his ministry's complete support. Kejriwal's own unyielding cough that landed him in Bengaluru for treatment is perhaps the best example of just how poor the quality of air in the national capital is and an indicator of the rising number of cases of heart disease and respiratory diseases in the city. But it turns out, moving out of Delhi may not be as viable an option as the doctors suggest. A study by the Centre for Science and Environment from 2013 shows India's 'Garden City'- Bangalore was in the top 14 cities with dangerous levels of air pollution and Hyderabad exceeded the limits of ozone levels in summer alone. A Shakti Foundation air pollution study from back in 2011 highlights just how bad pollution is in port cities such as Chennai and Surat.

The Centre for Science and Environment study also revealed that northern cities such as Shimla, Jaipur and Srinagar have a low PM reading, but the level of NO₂ (nitrogen) are very high, and even more so in eastern cities such as Jamshedpur, Howrah and Kolkata.

According to WHO's consolidated city-wise report from 2013, thirteen of the dirtiest 20 cities when it comes to air quality worldwide are in India. While Delhi is constantly compared to Beijing in terms of rising danger in air quality, unlike the Indian capital, the Beijing Municipal Government has invested \$160 billion to improve air quality and reduce the Particulate Matter (PM 2.5) particles by 25% by 2017. An announcement on action to be taken in India, however, is still awaited. --EJ