

5<sup>th</sup> International Conference on **Pollution Control and Sustainable Environment**

&amp;

10<sup>th</sup> Edition of International Conference on **Water: Pollution, Treatment & Research**

March 14-16, 2019 London, UK

**Air pollution a major factor in asthma predictability index among children living in and around Kolkata metropolis**Jayati Das<sup>1</sup> and Saibal Moitra<sup>2</sup><sup>1</sup>Shri Shikshayatan College and Jadavpur University, India<sup>2</sup>Allergy and Asthma Research Centre, India

Asthma is the most common pediatric chronic disease. Hindrance in asthma diagnosis is widespread resulting in unsatisfactory management in asthma. About 80% of pediatric asthma patients have symptom onset before age six, most of them before age three. However, only about 1/3 of children with at least one episode of asthmatic symptoms by age three will have asthma at age six and over. Asthma is under-diagnosed in 18-75 % of asthmatic children. Kolkata is categorized unhealthy for human beings. Deterioration in urban air quality in most megacities is quite profound and this city is no exception to this. An assessment of Kolkata air quality is done where the listed pollutants' (RPM, SPM, NO<sub>2</sub> and SO<sub>2</sub>) annual average concentration are classified into four different categories; namely critical, high, moderate and low pollution. There are 17 monitoring stations in Kolkata and out of which five fall under the critical category, and the remaining 12 locations fall under the high category of NO<sub>2</sub> concentration; regarding RPM, four stations are critical and 13 stations record data which are under the high pollution category. Model questionnaires were run through 10% of the households to assess socio-economic conditions, critical environmental conditions, nature and types of health burdens as well as gauge the attitude in the direction of healthcare facilities were done. A comprehensive and up-to-date knowledge about the seasonal and spatial variation of asthma and studying air quality of the area was carried out. Mapping through GIS was done. It is desirable to construct an accurate model (Asthma Prediction Index) to predict whether a child will develop asthma in the future due to the deteriorating air pollution in the city.



Figure-Asthma prediction for children with atopic parents

**Recent Publications:**

1. Moitra S et al. (2016) Respiratory morbidity among Indian tea industry workers. International Journal of Occupational and Environmental Medicine 7(3):148-155.

## JOINT EVENT

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2. Moitra S et al. (2015) Exposure associated respiratory impairments among Indian tea industry workers. European Respiratory Journal 46: OA2915

### Biography

Jayati Das is currently a Postdoctoral Research Fellow at the Jadavpur University, Kolkata (India). She is also a teaching Faculty at Shri Shikshayatan College and Calcutta University. She holds the post of Secretary of Allergy and Asthma Research Centre, Kolkata a well-known NGO. She has completed 3 projects in health geography. She has 30 research papers published in renowned geographical journals in India and abroad. Besides research and teaching she is involved in social work mainly for the under privileged children in Kolkata.

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