

Abstract

pollution significantly affects health, causing up to 7 million premature deaths annually with an even larger number of hospitalizations and days of sick leave. The negative impact of pollutants on human health is well known. Several epidemiological studies have observed positive associations between exposure to particulate matter (PM) and morbidity and mortality for obstructive pulmonary diseases, including asthma. Although there is well-documented evidence that short-term exposures to PM₁₀, O₃ or NO₂, even at very low concentrations, contribute to asthma exacerbations, no threshold for PM₁₀ concentrations has been established below the maximum recommended by World Health Organization (WHO). This study aims to analyse the levels and time of exposure from which exposure to PM₁₀ can have an impact in asthmatic patients, who visited the Emergency Department (ED) with an exacerbation of their asthma.