

The Sanitary Impact of Air Pollution in North Africa

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Introduction

In the last century, multiple sanitary accidents happened due to the urban atmospheric pollution, especially on decembre 1952 in london where 4000 deaths took place following the apparition of a smog. The atmospheric pollution is responsible for the surge of a vast range of sanitary manifestations requiring ambulatory or hospital care. The sanitary risks linked to the atmospheric pollution are now well established. In Algeria, The big Algiers is, confronted to an intense atmospheric pollution. This pollution is even more distinguished in the large agglomerations of the developing countries.

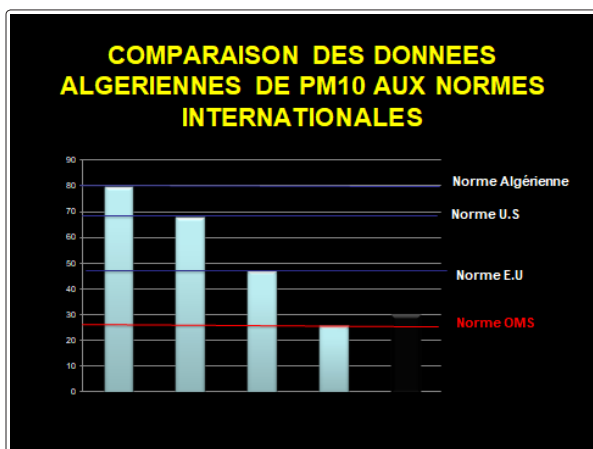
Problematic

There is a link between the respiratory symptoms and atmospheric pollution, whether this alteration in the environment comes from the traffic emissions in the urban areas and/or from petrochemical emissions from the industrial areas.

There is no threshold effect to this pollution, but we must note an increase in the prevalence of the symptoms depending on the degree of pollution in the exposed areas.

The National Public Health Institute , INSP , started the monitoring of the air in Algeria as part a cooperation project with the OMS , in 2001.

Comparison of the algerian data for pm10 with international standards



Objectives of the Study

- Quantify, within the population of Sidi M’hamed, algeria; the sanitary impact attributable to the exposition to PM10.
- Evaluate the prevalence of the exacerbations of chronic respiratory diseases .
- Determine the sanitary gain associated to the reduction of PM10 concentrations.
- Evaluate the direct health cost attributable to urban pollution.

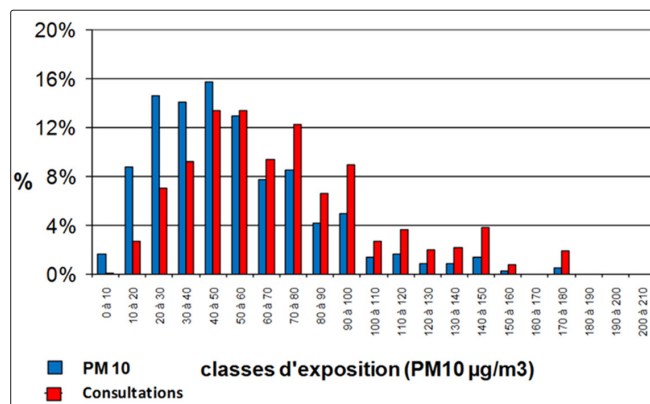
Type of Investigation

Prospective and descriptive study on patients aged above 15yo who present themselves at the CHU Mustapha emergencies for acute respiratory symptoms
The follow-up of admitted cases was held on a two consecutive years period, from April 1st, 2013 to March 31st, 2015. The estimated population of Sidi M’hamed is of 67 837 inhabitant.

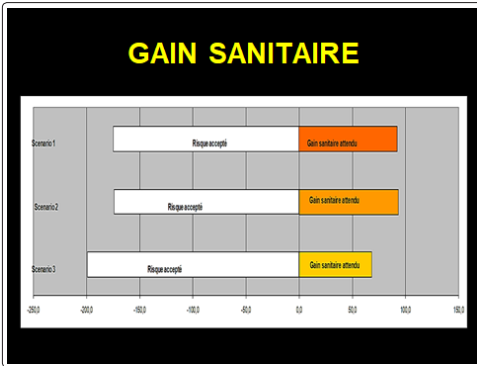
The Prevalence of the Exacerbations of Chronic Respiratory Diseases

Les symptômes respiratoires représentent 11.23 % des motifs de consultations hospitalières, étude présentée, The respiratory symptoms represent 11.23% of the motives for hospital consultations, presented study,

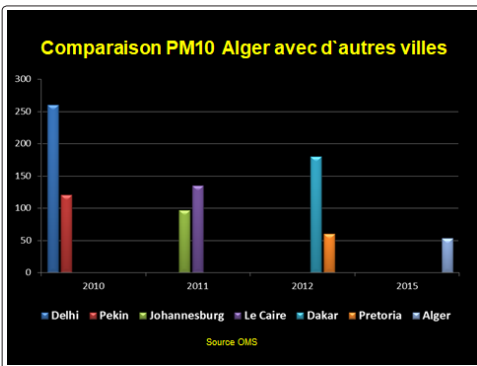
Impact of Air Pollution [Pm10]



Sanitary Gain



Comparaison pm10 alger avec d'autres villes



Recommendations

From The Alert Threshold

- 80MG/M3, PM10 CONCENTRATION PERSIST BEYOND 3 DAYS, PREVENTIVE ADVICE

Proposed Short term actions

- Mediatization, with sensitization of the general public on the emergency care path to follow.
- To renounce on using personal motor vehicle, first advice.
- Avoid all irritant factors: tobacco smoke, use of solvents, indoor space.
- Scrupulously respect the ongoing medical treatments or adapt them following doctor's advice.
- Chronic diseases, infants, pregnant women and aged persons, must avoid going out in the open; ideal solution, to go to less polluted regions during pollution peak.

Emergency measures to be taken by authorities

- Reduce, or even stop the operation of fixed installations situated in the geographical perimeter of the agglomeration.
- Limit the speed of motor vehicles in the whole concerned agglomeration.
- Immobilize at least 10% of vehicles of administration parcs and public services.
- Forbid, progressively, the access to the capital for polluting vehicles.

Conclusion

- Respiratory pathology: high demand for unscheduled care or emergency care.
- Demand dominated by the IRA and the exacerbations of MRC.
- Implication of environmental nuisance in this demand.
- Offered care not always adapted.
- Possibility of reducing the pollution impact on the frequency of MRC exacerbations.

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