

Lower Air Pollution = Less Asthma

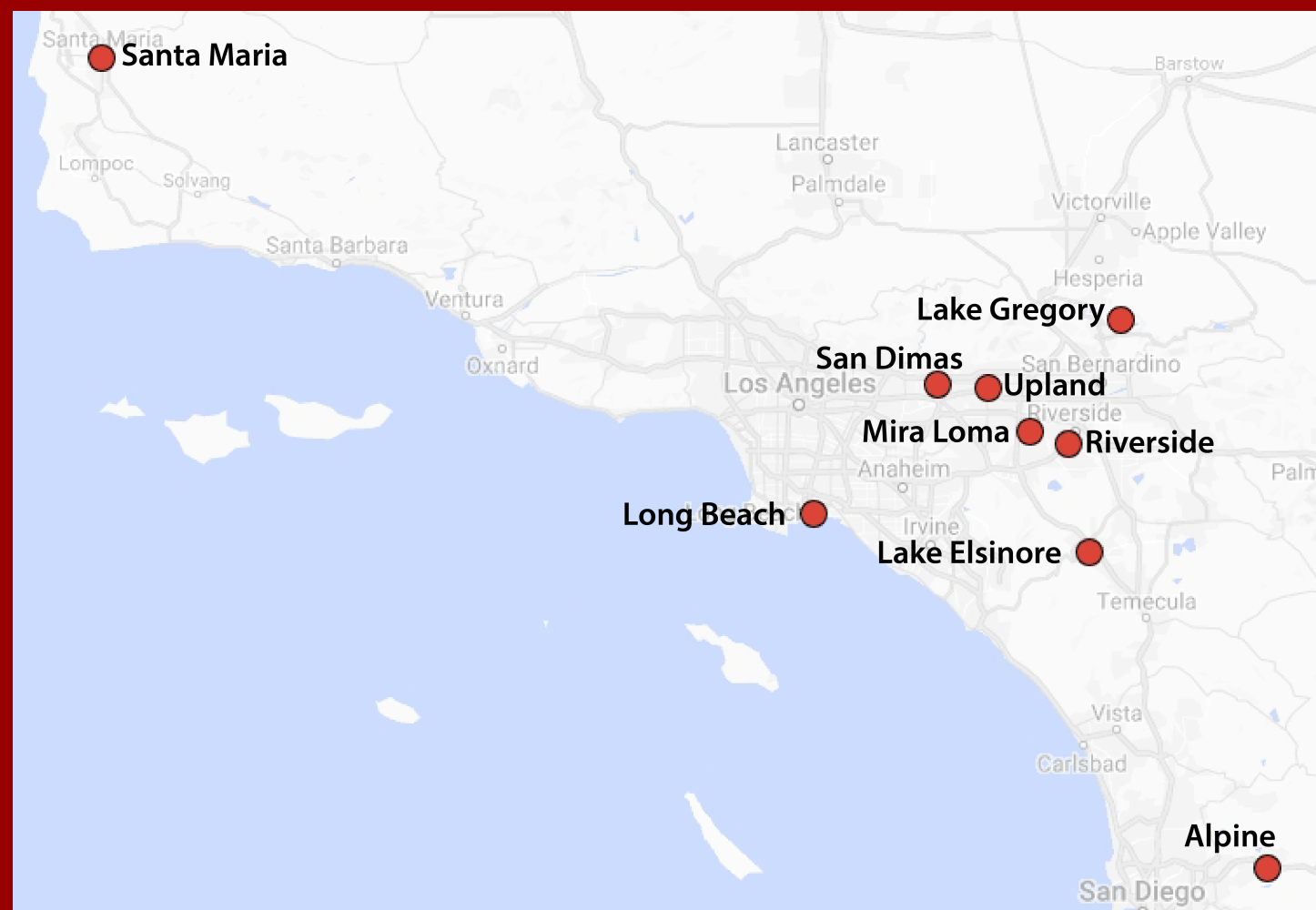
USC researchers find less pollution in Southern California is associated with lower rates of new asthma cases in children.

USC CHILDREN'S HEALTH STUDY

4,140 Children



9 SoCal Communities



WHAT WAS MEASURED?

New Asthma Cases



3 groups of kids from each of the 9 communities were studied to see if the rate of new asthma cases went down with the reductions in air pollution.

Pollution

Pollution levels across SoCal have been measured for a period spanning 20 years starting in 1993.



Particles: Coarse (PM10), Fine (PM 2.5 μ m)
Gases: Nitrogen Dioxide (NO₂), Ozone (O₃)

FINDINGS

Pollution ↓ New Asthma Cases ↓

The decline in the rate of new asthma cases across the 9 communities from 1993 - 2014, was associated with lower levels of nitrogen dioxide and fine particulate matter.

Nitrogen dioxide

22%

NO₂

Asthma rate

20%



Fine particulate matter

36%

PM_{2.5}

Asthma rate

19%



Garcia, et al. JAMA. 2019; 315(14):1491-1501. DOI:10.1001/jama.2019.5357

USC Infographic: Wendy Gutschow



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