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Supplemental Material

Estimates of the Global Burden of Ambient $PM_{2.5}$, Ozone, and NO_2 on Asthma Incidence and Emergency Room Visits

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Table of Contents

Figure S5. Number of asthma emergency room visits and new asthma cases in each region in 2015 among all ages (left) and children ages 0-17 years (right).

Figure S6. Percent of global and regional asthma ERVs for all ages in 2015 that are attributable to anthropogenic ozone (top) and $PM_{2.5}$ (bottom), using RR central estimates from three epidemiological meta-analyses.

Figure S7. Country-specific asthma ERVs per 100,000 people in 2015 attributable to $PM_{2.5}$- and ozone. Panels (a-c) show results using total concentrations and RR estimates from Orellano et al. (2017), Zhang et al. (2016), and Zheng et al. (2015), respectively. Panels (d-f) show results using anthropogenic concentrations and the same RR estimates. Circle size indicates country population size. Dotted line indicates 1:1 line.

Figure S8. Percent of global and regional asthma incidence among children in 2015 that are attributable to anthropogenic $PM_{2.5}$ (top) and NO_2 (bottom), using RR central estimates from three epidemiological meta-analyses. Regions are defined by World Health Organization regions.

Figure S9. Asthma incidence among children aged 0-17 years attributable to $PM_{2.5}$, using central RR estimates from Anderson et al. (2013) (a) Total concentrations, number of cases; (b) total concentrations, fraction of national asthma incidence; (c) anthropogenic concentrations, number of cases; (d) anthropogenic concentrations, fraction of national asthma incidence.