

PM_{2.5} Constituents and Hospital Emergency-Room Visits in Shanghai, China

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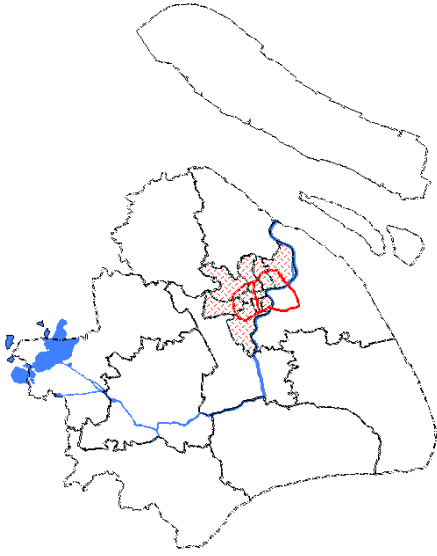
Tables 1

Figures 4

Table S1. Estimated percent increase [mean (95% CI)] in emergency room visits per IQR increase in PM_{2.5} mass, stratified by each tertile of PM_{2.5} constituents fraction

		Mean (95% CI)
Sulfate	Low	0.41 (-0.15, 0.97)
	Middle	0.64 (0.01, 1.27)
	High	0.59 (-0.02, 1.20)
Nitrate	Low	0.53 (-0.04, 1.10)
	Middle	0.62 (-0.03, 1.27)
	High	0.58 (0.04, 1.12)
Ammonium	Low	0.54 (0.01, 1.07)
	Middle	0.51 (-0.03, 1.05)
	High	0.64 (-0.04, 1.32)
Elemental carbon	Low	0.61 (-0.04, 1.26)
	Middle	0.71 (0.01, 1.41)
	High	0.35 (-0.04, 0.74)
Organic carbon	Low	0.57 (0.01, 1.13)
	Middle	0.62 (-0.05, 1.29)
	High	0.52 (-0.03, 1.07)

a):



b):

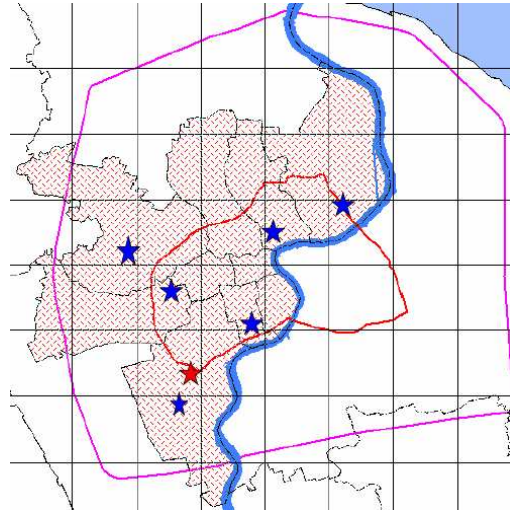
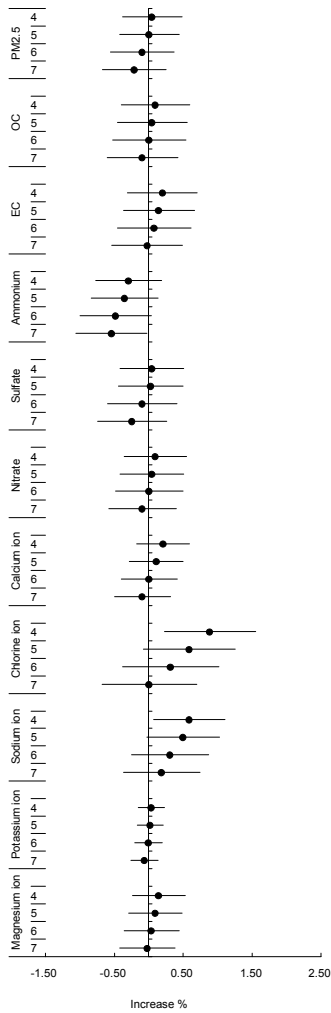
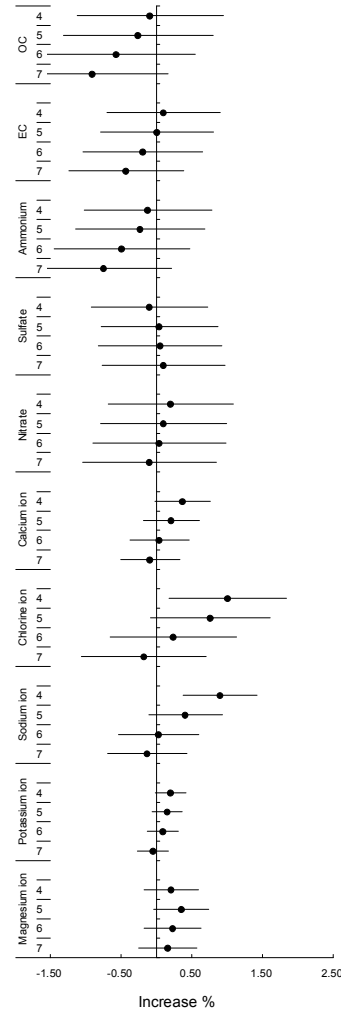


Figure S1. a) Map of Shanghai (The red part is our study area); b) Locations of one monitoring station (in red) providing the $PM_{2.5}$ constituents data, and six monitoring stations (in blue) providing the SO_2 and NO_2 data.

a):



b):



c):

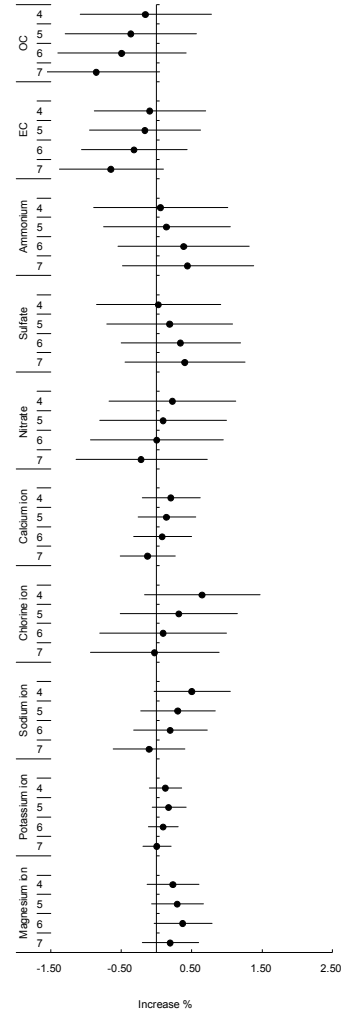


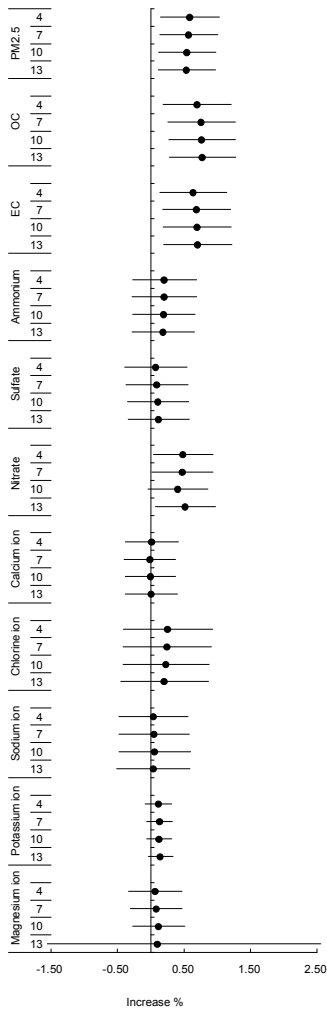
Figure S2. Estimated percent increase [mean (95% CI)] in emergency room visits per IQR increase in PM2.5 and its constituents' concentrations with extend lag structure (lag 4-7 days).

a): constituent concentration without adjustment for PM2.5 mass;

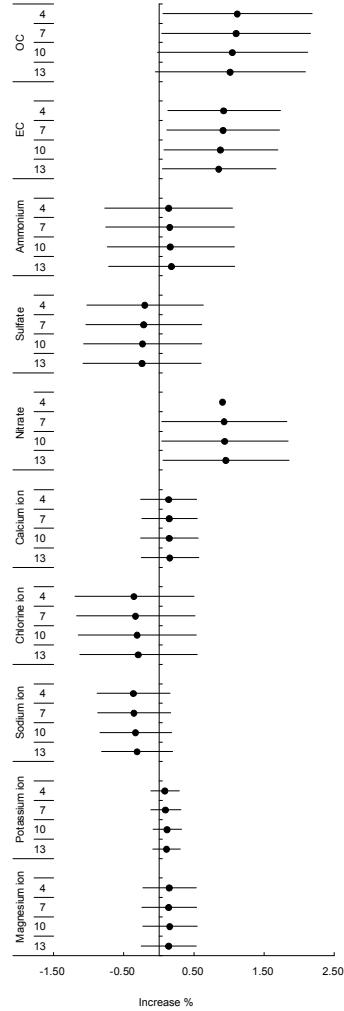
b): constituent concentration adjusting for PM2.5 mass;

c): PM2.5-adjusted constituent residuals which were obtained by constructing a linear regression model with constituent concentration as the dependent variable and PM2.5 mass as the independent variable.

a):



b):



c):

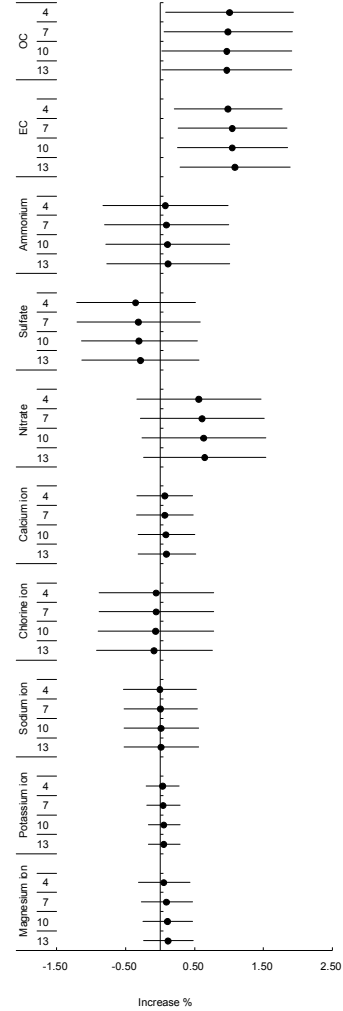


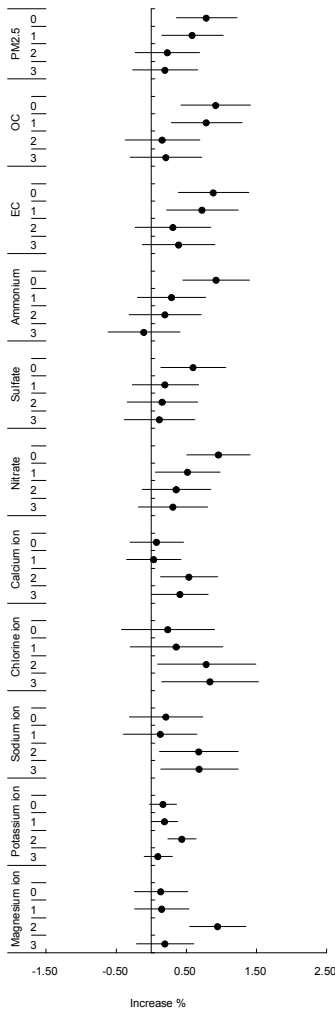
Figure S3. Estimated percent increase [mean (95% CI)] in emergency room visits per IQR increase in PM2.5 and its constituents' concentrations (lag 1), using alternative df /year for time trend.

a): constituent concentration without adjustment for PM2.5 mass;

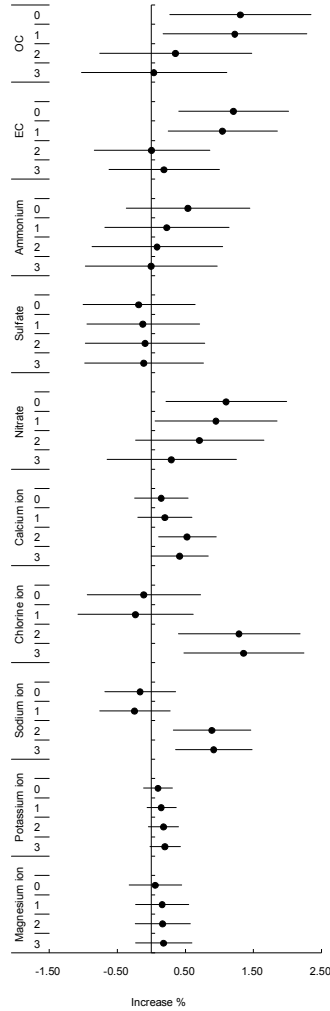
b): constituent concentration adjusting for PM2.5 mass;

c): PM2.5-adjusted constituent residuals which were obtained by constructing a linear regression model with constituent concentration as the dependent variable and PM2.5 mass as the independent variable.

a):



b):



c):

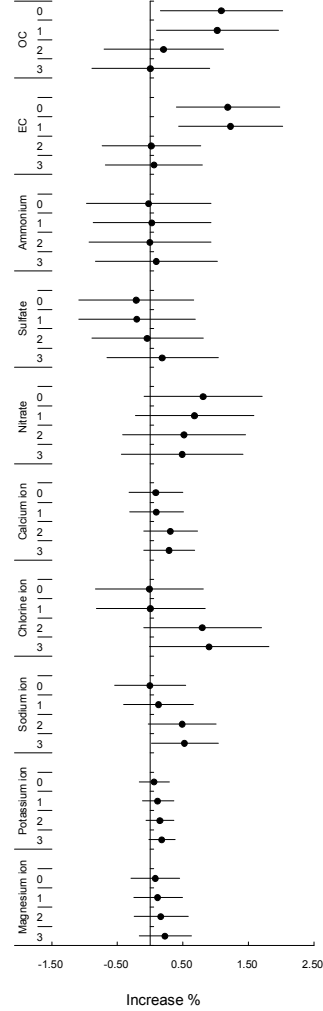


Figure S4. Estimated percent increase [mean (95% CI)] in emergency room visits per IQR increase in PM2.5 and its constituents' concentrations on the current day (lag 0) or the previous 1-3 days (lags 1, 2 and 3), without adjustment for SO₂ and NO₂.

a): constituent concentration without adjustment for PM2.5 mass;

b): constituent concentration adjusting for PM2.5 mass;

c): PM2.5-adjusted constituent residuals which were obtained by constructing a linear regression model with constituent concentration as the dependent variable and PM2.5 mass as the independent variable.