Supplementary Table 1: Summary statistics of daily outpatient admissions in the department of dermatology, air pollutants, and meteorological factors in Guiyang, China (2014–2016)

Daily data	Mean	SD	Min	P_{25}	Median	P_{75}	Max
Outpatient admissions in the department of dermatology							
Total (*N* = 156,769)	143.0	45.6	20.0	105.3	146.0	177.0	273.0
Age (years)							
≤6 (*N* = 19,483)	17.8	6.6	2.0	13.0	17.0	22.0	42.0
7–17 (*N* = 17,060)	15.6	7.3	0.0	10.0	14.0	19.0	51.0
18–64 (*N* = 106,229)	96.9	33.4	12.0	69.3	99.5	122.0	189.0
≥65 (*N* = 13,997)	12.8	6.6	0.0	7.0	13.0	17.0	39.0
Sex							
Female (*N* = 86,739)	79.1	27.1	11.0	57.0	80.0	99.0	159.0
Male (*N* = 70,030)	63.9	20.1	7.0	127.0	64.0	78.0	127.0
Season[a]							
Warm (*N* = 86,319)	156.4	45.8	52.0	273.0	160.0	190.0	273.0
Cool (*N* = 70,450)	129.5	41.3	20.0	96.0	132.0	158.8	256.0

Meteorological factors							
T (℃)	15.1	7.2	–3.6	8.9	16.9	21.1	27.0
P (hPa)	877.7	5.0	864.6	873.8	877.1	881.3	895.2
RH (%)	82	11	39	75	83	91	100
W (m/s)	2.4	0.8	0.8	1.9	2.4	2.9	6.7
ST (h)	2.8	0.9	0.0	0.0	0.9	5.5	12.1
Air pollutants							
$PM_{2.5}$ (μg/m^3)	39.7	21.8	8.0	24.0	35.0	49.0	188.0
PM_{10} (μg/m^3)	63.7	28.8	14.0	43.0	59.0	79.0	234.0
SO_2 (μg/m^3)	17.3	15.3	4.0	7.0	11.0	22.	116.0
NO_2 (μg/m^3)	27.7	9.0	9.0	21.0	26.0	32.0	71.0
CO (mg/m^3)	0.7	0.2	0.3	0.6	0.7	0.8	1.8
O_3 (μg/m^3)	74.8	29.1	10.0	53.0	72.0	92.0	173.0

[a]Warm: May to October; Cool: November to April. SD, standard deviation; P_x, *x*-th percentiles; Min, minimum; Max, maximum; *T*, daily mean temperature; *P*, daily mean atmospheric pressure; *W*, daily mean wind speed; RH, daily relative humidity; ST, daily total hours of sunshine; $PM_{2.5}$, particulate matter with an aerodynamic diameter less than 2.5 μm; PM_{10}, particulate matter with an aerodynamic diameter less than 10 μm; SO_2, sulfur dioxide; NO_2, nitrogen dioxide; CO, carbon monoxide; O_3, ozone.

Supplementary Table 2: Spearman's correlation coefficients between meteorological factors and air pollutants in Guiyang, China (2014–2016).

Items	*P*	RH	*W*	ST	$PM_{2.5}$	PM_{10}	SO_2	NO_2	CO	O_3
T	–0.742**	–0.239**	–0.021	0.503**	–0.456**	–0.262**	–0.716**	–0.263**	–0.561**	0.356**
P		0.012	–0.092**	–0.292**	0.422**	0.303**	0.541**	0.302**	0.354**	–0.227**
RH			–0.059	–0.658**	–0.278**	–0.483**	–0.149**	–0.173**	0.203**	–0.681**
W				0.039	–0.179**	–0.195**	–0.146**	–0.489**	–0.223**	0.085**
ST					0.009	0.190**	–0.126**	0.058	–0.229**	0.573**
$PM_{2.5}$						0.923**	0.678**	0.622**	0.596**	0.222**
PM_{10}							0.571**	0.673**	0.460**	0.384**
SO_2								0.480**	0.630**	–0.100**
NO_2									0.584**	0.070**
CO										–0.235**

**$P < 0.01$. T, daily mean temperature; P, daily mean atmospheric pressure; W, daily mean wind speed; RH, daily relative humidity; ST, daily total hours of sunshine; $PM_{2.5}$, particulate matter with an aerodynamic diameter less than 2.5 μm; PM_{10}, particulate matter with an aerodynamic diameter less than 10 μm; SO_2, sulfur dioxide; NO_2, nitrogen dioxide; CO, carbon monoxide; O_3, ozone.

Supplementary Table 3: Percent change (95% confidence interval) in daily outpatient admissions in the department of dermatology associated with 10 unit increases in meteorological factors in Guiyang, China (2014–2016)[a]

Lag days	T	P	RH	W	ST
0	8.21 (5.73, 10.75)**	2.19 (0.20, 4.22)*	0.90 (–0.24, 2.05)	–0.87 (–1.73, –0.01)*	–0.16 (–0.40, 0.08)
1	5.78 (3.75, 7.84)**	0.84 (–1.15, 2.86)	–0.33 (–1.00, 0.34)	0.17 (–0.58, 0.93)	0.11 (–0.09, 0.30)
2	4.92 (3.13, 6.73)**	0.60 (–1.17, 2.39)	–0.82 (–1.37, –0.27)	0.67 (–0.04, 1.39)	0.22 (0.05, 0.39)**
3	5.44 (3.76, 7.15)**	0.07 (–1.57, 1.73)	–0.78 (–1.30, –0.26)**	0.44 (–0.27, 1.16)	0.27 (0.11, 0.43)**
4	4.68 (3.09, 6.29)**	–1.89 (–3.42, –0.33)*	–0.26 (–0.76, 0.25)	1.15 (0.46, 1.85)**	0.39 (0.23, 0.55)**
5	3.57 (2.05, 5.11)**	–2.45 (–3.92, –0.95)**	1.03 (0.52, 1.54)**	1.25 (0.55, 1.95)**	0.04 (–0.12, 0.19)
6	5.39 (3.89, 6.91)**	–2.66 (–4.10, –1.19)**	0.69 (0.20, 1.19)**	1.03 (0.33, 1.73)**	0.12 (–0.04, 0.27)
01	7.74 (5.36, 10.17)**	1.82 (–0.41, 4.09)	–0.08 (–1.09, 0.95)	–0.46 (–1.55, 0.65)	–0.01 (–0.29, 0.28)
02	7.55 (5.22, 9.93)**	1.71 (–0.65, 4.13)	–0.74 (–1.65, 0.18)	0.20 (–1.03, 1.44)	0.22 (–0.08, 0.52)
03	8.10 (5.77, 10.48)**	1.45 (–0.99, 3.95)	–1.15 (–2.03, –0.26)*	0.66 (–0.66, 2.01)	0.41 (0.10, 0.72)**
04	8.58 (6.25, 10.96)**	0.22 (–2.26, 2.77)	–1.05 (–1.94, –0.16)*	1.40 (–0.03, 2.84)	0.67 (0.35, 0.99)**
05	8.61 (6.27, 11.00)**	–0.96 (–3.46, 1.61)	–0.38 (–1.27, 0.52)	2.54 (1.00, 4.09)**	0.59 (0.27, 0.92)**
06	9.06 (6.71, 11.46)**	–2.00 (–4.52, 0.60)	0.02 (–0.88, 0.93)	3.23 (1.58, 4.92)**	0.61 (0.28, 0.94)**

*$P < 0.05$. **$P < 0.01$. [a]The models were all adjusted for long-term time trends, season, effect of holidays, day of week, air pollutants, and the other meteorological factors besides the estimated one, for example, when evaluating the effect of temperature, model was adjusted for atmospheric pressure, wind speed, relative humidity, and total hours of sunshine. *T*, daily mean temperature; *P*, daily mean atmospheric pressure; *W*, daily mean wind speed; RH, daily relative humidity; ST, daily total hours of sunshine.

Supplementary Table 4: Percent increase (95% confidence interval) in daily outpatient admissions in the department of dermatology associated with 10 unit increases in meteorological factors stratified by age, gender, and season in Guiyang, China (2014–2016)[a]

Group		*T*	*P*	RH	*W*	ST
Age (years)	≤ 6	18.83 (11.89, 26.20)**	–8.69 (–12.47, –4.75)**	4.58 (1.97, 7.25)**	2.18 (0.23, 4.17)*	0.14 (–0.30, 0.59)
	7–17	8.64 (1.57, 16.21)*	–6.09 (–10.37, –1.62)**	–3.49 (–6.68, –0.19)*	13.22 (7.85, 18.87)**	1.05 (0.06, 2.05)*
	18–64	8.50 (5.71, 11.37)**	3.18 (0.76, 5.65)**	–1.53 (–2.58, –0.47)**	2.95 (0.97, 4.97)**	0.99 (0.61, 1.38)**
	≥ 65	9.08 (1.64, 17.06)*	–7.60 (–14.85, 0.26)	–1.80 (–4.67, 1.15)	1.91 (–2.12, 6.12)	0.42 (–0.14, 0.98)
Sex	Female	9.97 (6.83, 13.20)**	3.21 (0.22, 6.30)*	–1.66 (–2.83, –0.48)**	4.40 (2.19, 6.65)**	0.87 (0.45, 1.29)**
	Male	8.80 (5.34, 12.37)**	1.92 (–0.54, 4.44)	–0.48 (–1.79, 0.84)	1.15 (0.12, 2.19)*	0.34 (0.05, 0.64)*
Season[b]	Warm	4.93 (2.02, 7.91)**	18.42 (13.59, 19.61)**	–1.97 (–2.74, –1.20)**	10.68 (8.11, 13.31)**	2.16 (1.67, 2.65)**
	Cool	–10.01 (–12.8, –7.14)**	9.55 (5.58, 13.67)**	–1.17 (–2.00, –0.34)**	2.25 (1.07, 3.44)**	1.89 (1.33, 2.45)**

*$P < 0.05$. **$P<0.01$. *T*, daily mean temperature; *P*, daily mean atmospheric pressure; *W*, daily mean wind speed; RH, daily relative humidity; ST, daily total hours of sunshine.

[a]The models were all adjusted for long-term time trends, season (except for groups stratified by season), effect of holidays, day of week, air pollutants, and the other meteorological factors besides the estimated one, for example, when evaluating the effect of temperature, model was adjusted for atmospheric pressure, wind speed, relative humidity, and total hours of sunshine. The highest estimated effects of main meteorological factors on daily outpatient admissions at different lag days were selected for different groups.

[b]Warm: May to October; Cool: November to April.

Supplementary Table 5: Percent increase (95% confidence interval) in daily outpatient admissions in the department of dermatology associated with 10 unit increases in meteorological factors before and after adjustment for covariates in Guiyang, China (2014–2016)[a]

Meteorological factors	Covariates	Estimates (95% CI)
T	None	17.46 (16.59, 18.34)**
	P	12.82 (10.99, 14.67)**
	RH	12.02 (10.33, 13.73)**
	W	12.47 (10.79, 14.17)**
	ST	11.83 (10.15, 13.53)**
	P + RH + W + ST	11.79 (9.90, 13.70)**
	P + RH + W + ST + $PM_{2.5}$ + PM_{10} + SO_2 + NO_2 + CO + O_3	9.06 (6.71, 11.46)**
P	None	–13.04 (–13.90, –26.17)**
	T	3.22 (1.47, 5.00)**
	RH	–4.12 (–5.43, –2.79)**
	W	–3.59 (–4.91, –2.25)**
	ST	–3.00 (–4.34, –1.64)**
	T + RH + W + ST	2.87 (0.97, 4.8)**
	T + RH + W + ST + $PM_{2.5}$ + PM_{10} + SO_2 + NO_2 + CO + O_3	2.19 (0.20, 4.22)*
RH	None	0.90 (0.32, 1.49)**
	T	–0.84 (–1.49, –0.19)*
	P	–1.92 (–2.52, –1.32)**

	W	–2.05 (–2.65, –1.45)*
	ST	–1.36 (–2.01, –0.69)**
	T + *P* + *W* + ST	–0.73 (–1.42, –0.04)*
	T + *P* + *W* + ST + $PM_{2.5}$ + PM_{10} + SO_2 + NO_2 + CO + O_3	–1.15 (–2.03, –0.26)*
W	None	–1.44 (–2.67, –0.21)*
	T	3.62 (2.22, 5.03)**
	P	2.93 (1.59, 4.29)**
	RH	2.49 (1.15, 3.85)**
	ST	2.82 (1.47, 4.19)**
	T + *P* + RH + ST	3.98 (2.54, 5.45)**
	T + *P* + RH + ST + $PM_{2.5}$ + PM_{10} + SO_2 + NO_2 + CO + O_3	3.23 (1.58, 4.92)**
ST	None	1.80 (1.59, 1.74)**
	T	0.53 (0.27, 0.79)**
	P	0.99 (0.77, 1.22)**
	RH	1.14 (0.87, 1.40)**
	W	1.11 (0.88, 1.33)**
	T + P + RH + W	0.71 (0.41, 1.01)**
	T + P + RH + W + $PM_{2.5}$ + PM_{10} + SO_2 + NO_2 + `CO + O_3	0.41 (0.10, 0.72)**

**P<0.01. [a]The models were all adjusted for long-term time trends, season, effect of holidays and day of week. Lag day 06, 0, 03, 06, and 04 were used for daily mean temperature, atmospheric pressure, wind speed, relative humidity, and total hours of sunshine, respectively. The highest estimated effects of main meteorological factors on daily outpatient admissions at different lag days were selected for different groups. *T*, daily mean temperature; *P*, daily mean atmospheric pressure; *W*, daily mean wind speed; RH, daily relative humidity; ST, daily total hours of sunshine; $PM_{2.5}$, particulate matter with an aerodynamic diameter less than 2.5 μm; PM_{10}, particulate matter with an aerodynamic diameter less than 10 μm; SO_2, sulfur dioxide; NO_2, nitrogen dioxide; CO, carbon monoxide; O_3, ozone.

Supplementary Figure 1: The estimated effects of main meteorological factors on daily outpatient admissions in the department of dermatology.