

Study of the effect of particulate matter (PM₁₀) on emergency hospital admissions and mortality for the period of 2001 to 2010 and of nitrogen dioxide on mortality for the period of 1995 to 2010

Annex for the final report

Under the mandate of the cantons:

Aargau, Appenzell-Innerrhoden, Appenzell-Ausserrhoden, Basel-Landschaft, Basel-Stadt, Bern,
Freiburg, Graubünden, Luzern, Nidwalden, Obwalden, Schaffhausen, Schwyz, Solothurn, St.
Gallen, Tessin, Thurgau, Uri, Wallis, Zug, Zürich and Fürstentum Liechtenstein

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1 Annex

1.1 Tables

Table A1. Number of inhabitants in the participating cantons and percent of their population included in the analysis

Participating canton in the study	Number of inhabitants in the canton [§]	Number of inhabitants in the analysis region	% of inhabitants of a canton integrated in the analysis
AG	610 939	610 939	100.0
AI/AR	699 84	25 168	36.0
BE	983 252	848 104	86.3
BL	273 724	273 724	100.0
BS	184 949	184 949	100.0
FL	361 49	36 149	100.0
FR	280 227	251 385	89.7
GR	194 442	99 546	51.2
LU	378 937	361 897	95.5
NW	40 682	40 682	100.0
OW	36 426	32 160	88.3
SG	482 891	462 795	95.8
SH	76 618	76 618	100.0
SO	255 471	255 471	100.0
SZ	147 162	125 216	85.1
TG	249 313	249 313	100.0
TI	334 436	323 116	96.6
UR	360 09	17 200	47.8
VS	314 478	186 550	59.3
ZG	113 174	113 174	100.0
ZH	1 369 419	1 369 419	100.0
All Switzerland	7 556 326	5 943 575	78.7

[§]Population based on the 2010 Census

Table A2. Descriptive statistics of the variables used for modelling for the period of 1995 to 2010 (2001–2010 for PM10).

Analysis Region ^s	Parameter	Number of days (non-missing)	Mean	Standard deviation	Minimum	Maximum	First Quartile	Median	Third Quartile
AG/BL/BS/SO (01)	PM10 (µg/m ³)	3652	21.52	13.70	1.80	120.40	12.10	18.20	27.50
	NO ₂ (µg/m ³)	5844	26.55	14.54	1.30	97.70	15.40	24.50	35.70
	O ₃ (µg/m ³)	5844	46.67	28.14	0.40	147.04	22.50	48.75	66.90
	Temperature (°C)	5844	10.80	7.42	-12.10	29.00	5.10	11.20	16.70
	Relative humidity (%)	5844	74.72	10.67	34.90	99.70	67.50	75.80	82.60
	Atmospheric pressure (hPa)	5844	979.83	7.47	944.30	1001.20	975.60	980.10	984.60
	Deaths due to medical causes/day	5844	14.76	4.06	3.00	34.00	12.00	15.00	17.00
	Deaths due to respiratory causes/day	5844	1.01	1.06	0.00	8.00	0.00	1.00	2.00
	Deaths due to cardiovascular causes/day	5844	5.93	2.54	0.00	21.00	4.00	6.00	8.00
	Influenza cases/day x 100 doctor consultations	5844	0.86	1.35	-0.22	9.07	0.09	0.33	0.92
BE/FR/SO (02)	PM10 (µg/m ³)	3652	20.05	13.39	2.00	149.80	11.00	17.10	25.10
	NO ₂ (µg/m ³)	5844	16.19	9.44	2.10	77.90	9.30	13.70	20.80
	O ₃ (µg/m ³)	5844	54.01	25.54	1.20	137.04	34.84	57.73	72.19
	Temperature (°C)	5844	9.63	7.47	-10.90	26.60	3.60	9.90	15.70
	Relative humidity (%)	5844	77.72	10.63	38.20	99.90	70.40	78.30	85.60
	Atmospheric pressure (hPa)	5844	959.65	7.10	925.40	979.90	955.60	960.10	964.20
	Deaths due to medical causes/day	5844	9.52	3.28	1.00	24.00	7.00	9.00	12.00
	Deaths due to respiratory causes/day	5844	0.75	0.93	0.00	6.00	0.00	1.00	1.00
	Deaths due to cardiovascular causes/day	5844	3.82	2.01	0.00	14.00	2.00	4.00	5.00
	Influenza cases/day x 100 doctor consultations	5844	0.83	1.53	-0.19	13.69	0.05	0.21	0.71

^s based on MedStat-Regions with the exception of regions VS (09) and GR (13) which are based on communities

Table A2. Continuation

Analysis Region ^s	Parameter	Number of days (non-missing)	Mean	Standard deviation	Minimum	Maximum	First Quartile	Median	Third Quartile
AG/BE/LU/SO (03)	PM10 (µg/m ³)	3652	25.31	15.35	3.20	147.40	14.90	21.70	31.20
	NO ₂ (µg/m ³)	5844	39.05	14.35	5.20	108.50	28.70	38.10	47.90
	O ₃ (µg/m ³)	5844	33.00	21.99	0.05	123.26	14.60	31.40	47.82
	Temperature (°C)	5844	9.28	7.46	-10.50	25.50	3.20	9.50	15.40
	Relative humidity (%)	5844	80.05	9.69	40.60	98.80	73.40	81.10	88.00
	Atmospheric pressure (hPa)	5844	968.11	7.36	933.20	988.90	963.90	968.50	972.80
	Deaths due to medical causes/day	5844	14.20	4.11	1.00	38.00	11.00	14.00	17.00
	Deaths due to respiratory causes/day	5844	0.93	1.06	0.00	9.00	0.00	1.00	1.00
	Deaths due to cardiovascular causes/day	5844	6.17	2.60	0.00	18.00	4.00	6.00	8.00
	Influenza cases/day x 100 doctor consultations	5844	0.77	1.31	-0.10	8.56	0.06	0.26	0.68
BE (04)	PM10 (µg/m ³)	3652	21.18	14.32	2.80	173.60	11.60	17.60	26.30
	NO ₂ (µg/m ³)	4748	27.46	13.80	3.50	95.00	17.30	24.60	35.10
	O ₃ (µg/m ³)	5844	46.37	24.24	-3.10	137.40	25.60	44.90	64.40
	Temperature (°C)	5844	9.36	7.53	-11.00	25.90	3.30	9.70	15.50
	Relative humidity (%)	5844	76.80	9.95	41.30	98.90	69.80	77.85	84.40
	Atmospheric pressure (hPa)	5844	951.51	7.08	918.30	972.10	947.60	952.00	956.10
	Deaths due to medical causes/day	5844	13.28	3.99	2.00	31.00	10.00	13.00	16.00
	Deaths due to respiratory causes/day	5844	0.88	1.01	0.00	8.00	0.00	1.00	1.00
	Deaths due to cardiovascular causes/day	5844	5.81	2.58	0.00	19.00	4.00	6.00	7.00
	Influenza cases/day x 100 doctor consultations	5844	0.69	1.30	-0.08	8.46	0.04	0.16	0.53

^s based on MedStat-Regions with the exception of regions VS (09) and GR (13) which are based on communities

Table A2. Continuation

Analysis Region ^s	Parameter	Number of days (non-missing)	Mean	Standard deviation	Minimum	Maximum	First Quartile	Median	Third Quartile
LU/ZG (05)	PM10 (µg/m ³)	3652	22.39	14.41	0.20	161.20	12.90	19.00	27.60
	NO ₂ (µg/m ³)	5844	26.91	11.38	4.80	86.70	18.50	24.70	33.10
	O ₃ (µg/m ³)	5844	44.11	26.97	0.70	144.10	20.10	44.60	63.40
	Temperature (°C)	5844	9.91	7.49	-10.30	26.60	3.70	10.10	16.00
	Relative humidity (%)	5844	77.39	10.66	35.90	99.30	70.30	78.80	85.60
	Atmospheric pressure (hPa)	5844	963.73	7.28	929.40	984.50	959.60	964.10	968.40
	Deaths due to medical causes/day	5844	8.32	3.04	0.00	23.00	6.00	8.00	10.00
	Deaths due to respiratory causes/day	5844	0.49	0.75	0.00	6.00	0.00	0.00	1.00
	Deaths due to cardiovascular causes/day	5844	3.63	1.95	0.00	12.00	2.00	3.00	5.00
	Influenza cases/day x 100 doctor consultations	5844	0.72	1.31	-0.30	11.20	0.01	0.22	0.75
LU/NW/OW/SZ/UR (06)	PM10 (µg/m ³)	3652	21.77	12.79	2.80	137.30	13.00	18.80	26.70
	NO ₂ (µg/m ³)	4392	23.73	10.81	5.20	72.30	15.70	21.25	29.60
	O ₃ (µg/m ³)	4383	43.92	24.60	1.40	125.00	22.80	44.30	61.50
	Temperature (°C)	5844	10.26	7.31	-9.20	29.70	4.30	10.70	16.30
	Relative humidity (%)	5844	73.58	12.26	14.30	98.80	67.50	75.70	82.30
	Atmospheric pressure (hPa)	5844	964.57	7.30	931.30	985.40	960.40	965.00	969.30
	Deaths due to medical causes/day	5844	2.79	1.69	0.00	11.00	2.00	3.00	4.00
	Deaths due to respiratory causes/day	5844	0.17	0.42	0.00	3.00	0.00	0.00	0.00
	Deaths due to cardiovascular causes/day	5844	1.24	1.15	0.00	9.00	0.00	1.00	2.00
	Influenza cases/day x 100 doctor consultations	5844	0.80	1.47	-0.51	12.27	0.00	0.17	0.88

^s based on MedStat-Regions with the exception of regions VS (09) and GR (13) which are based on communities

Table A2. Continuation

Analysis Region ^s	Parameter	Number of days (non-missing)	Mean	Standard deviation	Minimum	Maximum	First Quartile	Median	Third Quartile
TI Sottoceneri (07)	PM10 (µg/m ³)	3652	29.29	19.39	0.00	173.10	16.00	25.10	37.30
	NO ₂ (µg/m ³)	5844	38.37	16.53	5.10	110.00	25.00	36.75	49.50
	O ₃ (µg/m ³)	5844	49.87	37.42	0.20	174.98	15.86	44.80	76.60
	Temperature (°C)	5844	12.83	7.08	-4.40	28.20	6.70	12.70	18.80
	Relative humidity (%)	5844	68.34	16.23	13.40	98.80	59.38	70.40	80.10
	Deaths due to medical causes/day	5844	3.98	2.07	0.00	13.00	2.00	4.00	5.00
	Deaths due to respiratory causes/day	5844	0.30	0.56	0.00	4.00	0.00	0.00	1.00
	Deaths due to cardiovascular causes/day	5844	1.45	1.23	0.00	9.00	1.00	1.00	2.00
	Influenza cases/day x 100 doctor consultations	5844	1.24	1.67	-0.55	17.28	0.18	0.66	1.53
	Atmospheric pressure (hPa)	5844	983.11	7.37	946.00	1004.90	978.60	983.50	987.90
TI Sopraceneri/GR (08)	PM10 (µg/m ³)	3652	26.52	18.55	0.60	195.10	13.20	22.20	35.50
	NO ₂ (µg/m ³)	5844	24.04	13.79	1.20	78.10	13.17	20.60	32.70
	O ₃ (µg/m ³)	5844	48.09	32.02	0.10	148.30	17.34	48.80	72.55
	Temperature (°C)	5844	11.92	7.75	-6.90	27.60	5.20	12.20	18.60
	Relative humidity (%)	5844	72.48	15.76	15.70	99.80	63.50	74.95	84.20
	Atmospheric pressure (hPa)	5844	992.41	7.18	957.80	1016.10	988.10	992.50	996.90
	Deaths due to medical causes/day	5844	3.05	1.77	0.00	11.00	2.00	3.00	4.00
	Deaths due to respiratory causes/day	5844	0.25	0.51	0.00	5.00	0.00	0.00	0.00
	Deaths due to cardiovascular causes/day	5844	1.21	1.12	0.00	8.00	0.00	1.00	2.00
	Influenza cases/day x 100 doctor consultations	5844	1.21	1.63	-0.24	16.30	0.18	0.63	1.46

^s based on MedStat-Regions with the exception of regions VS (09) and GR (13) which are based on communities

Table A2. Continuation

Analysis Region ^s	Parameter	Number of days (non-missing)	Mean	Standard deviation	Minimum	Maximum	First Quartile	Median	Third Quartile
VS (09)	PM10 (µg/m ³)	3652	23.24	12.76	1.70	123.10	14.10	20.50	29.10
	NO ₂ (µg/m ³)	5844	35.64	14.55	6.00	104.00	24.90	32.60	44.30
	O ₃ (µg/m ³)	5844	39.18	25.27	0.01	121.77	14.50	39.70	60.55
	Temperature (°C)	5844	10.50	7.89	-11.00	27.40	4.00	11.10	17.00
	Relative humidity (%)	5844	70.00	11.72	36.10	99.80	61.50	70.30	78.30
	Atmospheric pressure (hPa)	5844	960.19	7.00	927.10	981.00	956.20	960.50	964.50
	Deaths due to medical causes/day	5844	3.57	1.97	0.00	14.00	2.00	3.00	5.00
	Deaths due to respiratory causes/day	5844	0.27	0.53	0.00	4.00	0.00	0.00	0.00
	Deaths due to cardiovascular causes/day	5844	1.34	1.19	0.00	8.00	0.00	1.00	2.00
	Influenza cases/day x 100 doctor consultations	5844	1.13	2.14	-0.38	15.71	0.00	0.27	1.15
SG/SH/SZ/ZH (10)	PM10 (µg/m ³)	3652	23.43	14.74	2.60	165.30	13.40	19.74	29.60
	NO ₂ (µg/m ³)	5844	35.88	14.24	7.40	131.90	25.50	34.00	43.70
	O ₃ (µg/m ³)	5844	43.19	26.37	0.53	127.73	20.71	43.90	62.40
	Temperature (°C)	5844	9.60	7.54	-11.70	27.00	3.50	9.90	15.70
	Relative humidity (%)	5844	77.66	10.49	41.00	99.50	70.40	78.80	85.90
	Atmospheric pressure (hPa)	5844	966.65	7.35	932.60	987.90	962.50	967.00	971.30
	Deaths due to medical causes/day	5844	30.47	6.30	9.00	57.00	26.00	30.00	34.00
	Deaths due to respiratory causes/day	5844	1.72	1.46	0.00	11.00	1.00	1.00	3.00
	Deaths due to cardiovascular causes/day	5844	12.73	3.98	1.00	31.00	10.00	12.00	15.00
	Influenza cases/day x 100 doctor consultations	5844	0.75	1.26	-0.03	9.02	0.09	0.25	0.66

^s based on MedStat-Regions with the exception of regions VS (09) and GR (13) which are based on communities

Table A2. Continuation

Analysis Region ^s	Parameter	Number of days (non-missing)	Mean	Standard deviation	Minimum	Maximum	First Quartile	Median	Third Quartile
AI/AR/SG/TG (11)	PM10 (µg/m ³)	3652	18.96	12.86	1.60	123.30	10.10	15.70	24.00
	NO ₂ (µg/m ³)	5844	15.42	9.68	1.60	85.30	8.70	12.65	19.40
	O ₃ (µg/m ³)	5844	54.96	26.14	0.60	142.79	35.42	58.18	73.48
	Temperature (°C)	5844	8.52	7.63	-13.90	27.00	2.70	9.10	14.40
	Relative humidity (%)	5844	75.73	13.47	22.20	100.00	67.18	77.20	86.10
	Atmospheric pressure (hPa)	5843	925.89	7.09	893.60	946.10	921.90	926.70	930.70
	Deaths due to medical causes/day	5844	10.40	3.46	0.00	27.00	8.00	10.00	13.00
	Deaths due to respiratory causes/day	5844	0.65	0.88	0.00	7.00	0.00	0.00	1.00
	Deaths due to cardiovascular causes/day	5844	4.69	2.27	0.00	15.00	3.00	4.00	6.00
	Influenza cases/day x 100 doctor consultations	5844	0.71	1.27	-0.11	8.07	0.05	0.23	0.66
AI/AR/FL/SG (12)	PM10 (µg/m ³)	3652	21.01	13.39	2.00	150.70	12.30	17.80	25.50
	NO ₂ (µg/m ³)	4383	18.07	12.36	-1.90	99.40	9.30	14.30	23.85
	O ₃ (µg/m ³)	4383	51.40	27.96	0.00	143.40	28.40	51.90	71.50
	Temperature (°C)	5844	10.34	7.74	-12.20	29.60	4.50	11.00	16.40
	Relative humidity (%)	5844	71.92	13.81	16.30	98.60	63.90	73.80	82.40
	Atmospheric pressure (hPa)	5844	963.01	7.37	929.00	984.10	958.88	963.50	967.70
	Deaths due to medical causes/day	5844	3.22	1.82	0.00	12.00	2.00	3.00	4.00
	Deaths due to respiratory causes/day	5844	0.21	0.48	0.00	4.00	0.00	0.00	0.00
	Deaths due to cardiovascular causes/day	5844	1.49	1.23	0.00	9.00	1.00	1.00	2.00
	Influenza cases/day x 100 doctor consultations	5844	0.68	1.20	-0.19	9.93	0.03	0.21	0.66

^s based on MedStat-Regions with the exception of regions VS (09) and GR (13) which are based on communities

Table A2. Continuation

Analysis Region ^s	Parameter	Number of days (non-missing)	Mean	Standard deviation	Minimum	Maximum	First Quartile	Median	Third Quartile
GR (13)	PM10 (µg/m ³)	3652	20.75	11.54	2.20	129.40	12.80	18.40	25.42
	NO ₂ (µg/m ³)	5783	31.27	10.86	1.60	99.30	24.20	29.90	36.70
	O ₃ (µg/m ³)	5449	43.77	21.89	-3.30	128.10	27.30	43.60	59.30
	Temperature (°C)	5844	10.11	7.58	-10.50	27.80	4.10	10.60	16.20
	Relative humidity (%)	5844	69.75	12.28	27.90	100.00	61.40	70.80	78.80
	Atmospheric pressure (hPa)	5844	952.28	7.35	919.30	974.10	948.10	952.70	957.00
	Deaths due to medical causes/day	5844	1.85	1.37	0.00	8.00	1.00	2.00	3.00
	Deaths due to respiratory causes/day	5844	0.15	0.39	0.00	3.00	0.00	0.00	0.00
	Deaths due to cardiovascular causes/day	5844	0.74	0.87	0.00	6.00	0.00	1.00	1.00
	Influenza cases/day x 100 doctor consultations	5844	0.90	1.80	-0.22	11.27	0.00	0.12	0.82

^s based on MedStat-Regions with the exception of regions VS (09) and GR (13) which are based on communities

Table A3. Daily number of emergency hospital admissions by cause and by age group

Analysis Region ^s	Cause category	Age group	Number of days	Mean	Standard deviation	Minimum	Maximum	First quartile	Median	Third quartile
AG/BL/BS/SO (01)	Medical causes (cases/day)	All ages	3645	77.41	15.61	30	140	66	77	88
		0 to 14	3645	5.02	3.06	0	17	3	5	7
		15 to 64	3645	35.43	7.62	11	64	30	35	40
		≥ 65	3645	36.96	9.81	8	75	30	37	44
		≥ 75	3645	24.68	7.37	4	58	19	24	29
	Cardiovascular causes (cases/day)	All ages	3645	16.45	4.98	2	40	13	16	20
		0 to 14	3645	0.06	0.25	0	3	0	0	0
		15 to 64	3645	4.62	2.40	0	16	3	4	6
		≥ 65	3645	11.77	4.02	0	31	9	12	14
		≥ 75	3645	8.09	3.22	0	26	6	8	10
	Respiratory causes (cases/day)	All ages	3645	8.78	4.43	0	37	6	8	11
		0 to 14	3645	1.50	1.59	0	10	0	1	2
		15 to 64	3645	2.85	1.87	0	12	1	3	4
		≥ 65	3645	4.44	2.77	0	20	2	4	6
		≥ 75	3645	3.04	2.17	0	14	1	3	4
BE/FR/SO (02)	Medical causes (cases/day)	All ages	3645	58.36	11.26	28	109	50	58	66
		0 to 14	3645	6.35	3.86	0	33	4	6	8
		15 to 64	3645	29.87	7.06	11	66	25	30	34
		≥ 65	3645	22.14	6.17	7	50	18	22	26
		≥ 75	3645	14.28	4.72	2	34	11	14	17
	Cardiovascular causes (cases/day)	All ages	3645	11.09	3.94	1	32	8	11	14
		0 to 14	3645	0.05	0.22	0	2	0	0	0
		15 to 64	3645	3.68	2.15	0	15	2	3	5
		≥ 65	3645	7.36	3.04	0	21	5	7	9
		≥ 75	3645	4.91	2.44	0	16	3	5	6
	Respiratory causes (cases/day)	All ages	3645	7.20	3.74	0	33	5	7	9
		0 to 14	3645	2.14	2.06	0	18	1	2	3
		15 to 64	3645	2.23	1.64	0	10	1	2	3
		≥ 65	3645	2.83	1.98	0	15	1	3	4
		≥ 75	3645	1.90	1.59	0	10	1	2	3

^s based on MedStat-Regions with the exception of regions VS (09) and GR (13) which are based on communities

Table A3. (Continuation)

Analysis Region ^s	Cause category	Age group	Number of days	Mean	Standard deviation	Minimum	Maximum	First quartile	Median	Third quartile
AG/BE/LU/SO (03)	Medical causes (cases/day)	All ages	3645	49.02	14.63	18	168	39	47	56
		0 to 14	3645	2.49	2.02	0	13	1	2	3
		15 to 64	3645	25.05	7.50	7	63	20	24	30
		≥ 65	3645	21.49	8.25	3	117	16	20	26
		≥ 75	3645	13.91	5.98	1	77	10	13	17
	Cardiovascular causes (cases/day)	All ages	3645	10.45	4.50	0	47	7	10	13
		0 to 14	3645	0.04	0.21	0	2	0	0	0
		15 to 64	3645	3.42	2.16	0	13	2	3	5
		≥ 65	3645	6.99	3.46	0	38	5	7	9
		≥ 75	3645	4.73	2.74	0	29	3	4	6
	Respiratory causes (cases/day)	All ages	3645	5.11	3.14	0	29	3	5	7
		0 to 14	3645	0.70	1.04	0	8	0	0	1
		15 to 64	3645	1.93	1.54	0	10	1	2	3
		≥ 65	3645	2.49	1.91	0	19	1	2	4
		≥ 75	3645	1.67	1.52	0	12	1	1	2
BE (04)	Medical causes (cases/day)	All ages	3645	59.46	14.11	14	106	50	60	69
		0 to 14	3645	3.57	2.13	0	12	2	3	5
		15 to 64	3645	26.90	7.20	6	52	22	27	32
		≥ 65	3645	28.99	8.95	4	69	23	29	35
		≥ 75	3645	19.66	6.79	2	48	15	19	24
	Cardiovascular causes (cases/day)	All ages	3645	13.07	4.73	1	32	10	13	16
		0 to 14	3645	0.03	0.19	0	2	0	0	0
		15 to 64	3645	3.76	2.24	0	15	2	4	5
		≥ 65	3645	9.27	3.78	0	28	7	9	12
		≥ 75	3645	6.53	3.07	0	21	4	6	8
	Respiratory causes (cases/day)	All ages	3645	6.65	3.57	0	23	4	6	9
		0 to 14	3645	1.18	1.28	0	9	0	1	2
		15 to 64	3645	2.12	1.61	0	12	1	2	3
		≥ 65	3645	3.36	2.29	0	17	2	3	5
		≥ 75	3645	2.35	1.85	0	12	1	2	3

^s based on MedStat-Regions with the exception of regions VS (09) and GR (13) which are based on communities

Table A3. (Continuation)

Analysis Region ^s	Cause category	Age group	Number of days	Mean	Standard deviation	Minimum	Maximum	First quartile	Median	Third quartile
LU/ZG (05)	Medical causes (cases/day)	All ages	3645	40.58	9.85	13	76	33	40	47
		0 to 14	3645	2.81	1.78	0	13	2	3	4
		15 to 64	3645	20.55	5.81	4	43	16	20	24
		≥ 65	3645	17.22	5.87	3	40	13	17	21
		≥ 75	3645	10.92	4.30	0	29	8	11	14
	Cardiovascular causes (cases/day)	All ages	3645	8.24	3.41	0	22	6	8	10
		0 to 14	3645	0.03	0.19	0	2	0	0	0
		15 to 64	3645	2.55	1.74	0	11	1	2	4
		≥ 65	3645	5.66	2.74	0	17	4	5	7
		≥ 75	3645	3.76	2.17	0	14	2	4	5
	Respiratory causes (cases/day)	All ages	3645	3.99	2.42	0	18	2	4	5
		0 to 14	3645	0.76	0.98	0	7	0	0	1
		15 to 64	3645	1.37	1.24	0	8	0	1	2
		≥ 65	3645	1.86	1.57	0	12	1	2	3
		≥ 75	3645	1.24	1.23	0	8	0	1	2
LU/NW/OW/SZ/UR (06)	Medical causes (cases/day)	All ages	3645	18.24	5.31	5	78	15	18	22
		0 to 14	3645	1.21	1.16	0	8	0	1	2
		15 to 64	3645	9.41	3.31	1	27	7	9	12
		≥ 65	3645	7.62	3.31	0	48	5	7	10
		≥ 75	3645	4.99	2.54	0	33	3	5	7
	Cardiovascular causes (cases/day)	All ages	3645	3.60	2.09	0	24	2	3	5
		0 to 14	3645	0.01	0.12	0	1	0	0	0
		15 to 64	3645	1.10	1.13	0	7	0	1	2
		≥ 65	3645	2.49	1.73	0	18	1	2	3
		≥ 75	3645	1.67	1.36	0	12	1	1	2
	Respiratory causes (cases/day)	All ages	3645	1.71	1.51	0	10	1	1	3
		0 to 14	3645	0.31	0.60	0	4	0	0	1
		15 to 64	3645	0.54	0.76	0	5	0	0	1
		≥ 65	3645	0.86	1.01	0	7	0	1	1
		≥ 75	3645	0.59	0.83	0	6	0	0	1

^s based on MedStat-Regions with the exception of regions VS (09) and GR (13) which are based on communities

Table A3. (Continuation)

Analysis Region ^s	Cause category	Age group	Number of days	Mean	Standard deviation	Minimum	Maximum	First quartile	Median	Third quartile
TI Sottoceneri (07)	Medical causes (cases/day)	All ages	3645	26.11	6.90	6	56	21	26	31
		0 to 14	3645	1.33	1.22	0	9	0	1	2
		15 to 64	3645	11.84	4.07	1	29	9	12	15
		≥ 65	3645	12.93	4.43	2	30	10	13	16
		≥ 75	3645	8.41	3.41	0	23	6	8	11
	Cardiovascular causes (cases/day)	All ages	3645	6.29	2.80	0	19	4	6	8
		0 to 14	3645	0.01	0.12	0	2	0	0	0
		15 to 64	3645	1.69	1.41	0	8	1	1	2
		≥ 65	3645	4.59	2.33	0	15	3	4	6
		≥ 75	3645	3.09	1.87	0	12	2	3	4
	Respiratory causes (cases/day)	All ages	3645	3.01	2.07	0	15	1	3	4
		0 to 14	3645	0.47	0.74	0	4	0	0	1
		15 to 64	3645	0.84	0.94	0	5	0	1	1
		≥ 65	3645	1.70	1.49	0	10	1	1	2
		≥ 75	3645	1.16	1.21	0	8	0	1	2
TI Sopraceneri/GR (08)	Medical causes (cases/day)	All ages	3645	18.47	5.41	2	40	15	18	22
		0 to 14	3645	1.23	1.18	0	8	0	1	2
		15 to 64	3645	8.09	3.17	0	21	6	8	10
		≥ 65	3645	9.15	3.59	0	24	7	9	11
		≥ 75	3645	6.03	2.80	0	18	4	6	8
	Cardiovascular causes (cases/day)	All ages	3645	4.24	2.18	0	16	3	4	6
		0 to 14	3645	0.01	0.12	0	2	0	0	0
		15 to 64	3645	1.12	1.13	0	8	0	1	2
		≥ 65	3645	3.11	1.85	0	12	2	3	4
		≥ 75	3645	2.11	1.51	0	11	1	2	3
	Respiratory causes (cases/day)	All ages	3645	2.39	1.83	0	14	1	2	3
		0 to 14	3645	0.46	0.75	0	5	0	0	1
		15 to 64	3645	0.63	0.83	0	5	0	0	1
		≥ 65	3645	1.30	1.29	0	9	0	1	2
		≥ 75	3645	0.88	1.02	0	7	0	1	1

^s based on MedStat-Regions with the exception of regions VS (09) and GR (13) which are based on communities

Table A3. (Continuation)

Analysis Region ^s	Cause category	Age group	Number of days	Mean	Standard deviation	Minimum	Maximum	First quartile	Median	Third quartile
VS (09)	Medical causes (cases/day)	All ages	2550	17.84	4.91	3	39	14	17	21
		0 to 14	2550	1.23	1.13	0	8	0	1	2
		15 to 64	2550	9.36	3.28	0	23	7	9	11
		≥ 65	2550	7.25	3.07	0	19	5	7	9
		≥ 75	2550	4.77	2.38	0	15	3	5	6
	Cardiovascular causes (cases/day)	All ages	2550	3.32	1.92	0	11	2	3	4
		0 to 14	2550	0.01	0.08	0	1	0	0	0
		15 to 64	2550	1.04	1.05	0	6	0	1	2
		≥ 65	2550	2.27	1.60	0	10	1	2	3
		≥ 75	2550	1.53	1.29	0	7	1	1	2
	Respiratory causes (cases/day)	All ages	2550	1.99	1.57	0	10	1	2	3
		0 to 14	2550	0.39	0.65	0	4	0	0	1
		15 to 64	2550	0.68	0.86	0	5	0	0	1
		≥ 65	2550	0.91	1.01	0	6	0	1	1
		≥ 75	2550	0.61	0.82	0	6	0	0	1
SG/SH/SZ/ZH (10)	Medical causes (cases/day)	All ages	3645	170.90	31.30	88	282	147	171	194
		0 to 14	3645	10.68	4.31	0	28	8	10	13
		15 to 64	3645	91.91	16.18	42	148	80	92	103
		≥ 65	3645	68.31	16.68	27	128	56	67	80
		≥ 75	3645	44.83	12.01	15	89	36	44	53
	Cardiovascular causes (cases/day)	All ages	3645	32.40	8.28	8	65	26	32	38
		0 to 14	3645	0.11	0.35	0	3	0	0	0
		15 to 64	3645	9.93	3.69	0	27	7	10	12
		≥ 65	3645	22.36	6.47	3	49	18	22	27
		≥ 75	3645	15.29	5.07	1	36	12	15	18
	Respiratory causes (cases/day)	All ages	3645	16.19	7.01	1	65	11	15	20
		0 to 14	3645	3.16	2.49	0	15	1	3	4
		15 to 64	3645	5.66	2.89	0	20	4	5	7
		≥ 65	3645	7.37	3.89	0	36	5	7	9
		≥ 75	3645	4.90	2.95	0	22	3	4	6

^s based on MedStat-Regions with the exception of regions VS (09) and GR (13) which are based on communities

Table A3. (Continuation)

Analysis Region ^s	Cause category	Age group	Number of days	Mean	Standard deviation	Minimum	Maximum	First quartile	Median	Third quartile
AI/AR/SG/TG (11)	Medical causes (cases/day)	All ages	3645	57.69	15.34	17	148	47	58	68
		0 to 14	3645	3.98	2.48	0	15	2	4	6
		15 to 64	3645	30.21	8.30	8	65	24	30	36
		≥ 65	3645	23.50	8.23	2	86	17	23	29
		≥ 75	3645	15.22	5.79	1	58	11	15	19
	Cardiovascular causes (cases/day)	All ages	3645	11.33	4.57	0	42	8	11	14
		0 to 14	3645	0.05	0.22	0	2	0	0	0
		15 to 64	3645	3.49	2.17	0	13	2	3	5
		≥ 65	3645	7.79	3.49	0	35	5	7	10
		≥ 75	3645	5.28	2.68	0	24	3	5	7
	Respiratory causes (cases/day)	All ages	3645	5.50	3.10	0	22	3	5	7
		0 to 14	3645	1.21	1.33	0	9	0	1	2
		15 to 64	3645	2.06	1.55	0	11	1	2	3
		≥ 65	3645	2.24	1.78	0	14	1	2	3
		≥ 75	3645	1.45	1.38	0	11	0	1	2
AI/AR/FL/SG (12)	Medical causes (cases/day)	All ages	3645	15.89	5.83	0	84	12	16	20
		0 to 14	3645	1.36	1.29	0	10	0	1	2
		15 to 64	3645	8.17	3.56	0	32	6	8	10
		≥ 65	3645	6.36	3.28	0	52	4	6	8
		≥ 75	3645	3.89	2.35	0	31	2	4	5
	Cardiovascular causes (cases/day)	All ages	3645	3.21	2.08	0	21	2	3	4
		0 to 14	3645	0.01	0.11	0	2	0	0	0
		15 to 64	3645	1.11	1.16	0	7	0	1	2
		≥ 65	3645	2.09	1.62	0	16	1	2	3
		≥ 75	3645	1.30	1.24	0	14	0	1	2
	Respiratory causes (cases/day)	All ages	3645	1.70	1.50	0	12	1	1	2
		0 to 14	3645	0.42	0.72	0	5	0	0	1
		15 to 64	3645	0.65	0.85	0	5	0	0	1
		≥ 65	3645	0.64	0.84	0	7	0	0	1
		≥ 75	3645	0.40	0.67	0	4	0	0	1

^s based on MedStat-Regions with the exception of regions VS (09) and GR (13) which are based on communities

Table A3. (Continuation)

Analysis Region ^s	Cause category	Age group	Number of days	Mean	Standard deviation	Minimum	Maximum	First quartile	Median	Third quartile
GR (13)	Medical causes (cases/day)	All ages	3280	10.83	4.48	1	73	8	11	14
		0 to 14	3280	1.28	1.10	0	7	0	1	2
		15 to 64	3280	5.67	2.66	0	32	4	5	7
		≥ 65	3280	4.56	2.55	0	38	3	4	6
		≥ 75	3280	3.13	1.93	0	25	2	3	4
	Cardiovascular causes (cases/day)	All ages	3280	2.13	1.52	0	18	1	2	3
		0 to 14	3280	0.01	0.11	0	1	0	0	0
		15 to 64	3280	0.69	0.83	0	5	0	0	1
		≥ 65	3280	1.56	1.26	0	13	1	1	2
		≥ 75	3280	1.13	1.06	0	7	0	1	2
	Respiratory causes (cases/day)	All ages	3280	1.52	1.30	0	10	1	1	2
		0 to 14	3280	0.51	0.74	0	4	0	0	1
		15 to 64	3280	0.46	0.70	0	4	0	0	1
		≥ 65	3280	0.68	0.84	0	6	0	0	1
		≥ 75	3280	0.47	0.69	0	6	0	0	1

^s based on MedStat-Regions with the exception of regions VS (09) and GR (13) which are based on communities

Table A4. . Estimates of the effect of PM10 on the event day (Lag = 0 days) and 6 previous days on emergency hospital admissions due to medical causes (calculated using polynomial lag models). The effects are given as % change in the number of cases (with 95%-confidence intervals) for a 10 µg/m³ increase in the pollutant level on the respective day for different age groups

Cause	Age group	Lag (days)	Relative risk	95% CI (Rel. risk)	% change in number of cases	95% CI (% change)	Heterogeneity test p-value ^{s#}
Medical	All age groups	0	1.00119	0.99966 to 1.00272	0.11903	-0.0339 to 0.27227	0.1241
		1	1.00014	0.99931 to 1.00097	0.01437	-0.0689 to 0.09778	
		2	1.00013	0.99920 to 1.00106	0.01342	-0.0795 to 0.10650	
		3	1.00061	0.99998 to 1.00123	0.06093	-0.0015 to 0.12342	
		4	1.00102	1.00017 to 1.00186	0.10167	0.01712 to 0.18628	
		5	1.00080	1.00002 to 1.00158	0.08037	0.00247 to 0.15832	
		6	0.99942	0.99808 to 1.00075	-0.05814	-0.1911 to 0.07501	
	15 to 64	0	1.00113	0.99905 to 1.00320	0.11268	-0.0943 to 0.32015	0.4228
		1	1.00087	0.99974 to 1.00199	0.08700	-0.0257 to 0.19991	
		2	1.00078	0.99952 to 1.00204	0.07807	-0.0478 to 0.20416	
		3	1.00072	0.99987 to 1.00156	0.07177	-0.0127 to 0.15630	
		4	1.00054	0.99939 to 1.00168	0.05395	-0.0605 to 0.16861	
		5	1.00010	0.99905 to 1.00116	0.01050	-0.0949 to 0.11607	
		6	0.99927	0.99747 to 1.00107	-0.07266	-0.2527 to 0.10770	
	≥ 65	0	1.00233	1.00010 to 1.00456	0.23304	0.01007 to 0.45650	0.6926
		1	0.99918	0.99796 to 1.00039	-0.08194	-0.2031 to 0.03940	
		2	0.99915	0.99779 to 1.00050	-0.08469	-0.2200 to 0.05090	
		3	1.00068	0.99976 to 1.00158	0.06770	-0.0233 to 0.15881	
		4	1.00219	1.00095 to 1.00342	0.21860	0.09517 to 0.34217	
		5	1.00211	1.00097 to 1.00324	0.21070	0.09708 to 0.32443	
		6	0.99887	0.99693 to 1.00081	-0.11276	-0.3061 to 0.08104	
	≥ 75	0	1.00229	0.99958 to 1.00499	0.22879	-0.0415 to 0.49986	0.4786
		1	0.99971	0.99824 to 1.00118	-0.02877	-0.1758 to 0.11849	
		2	0.99971	0.99806 to 1.00135	-0.02941	-0.1937 to 0.13517	
		3	1.00099	0.99988 to 1.00209	0.09857	-0.0118 to 0.20910	
		4	1.00227	1.00077 to 1.00377	0.22718	0.07725 to 0.37733	
		5	1.00228	1.00090 to 1.00366	0.22797	0.09002 to 0.36610	
		6	0.99973	0.99737 to 1.00208	-0.02721	-0.2621 to 0.20829	

Statistical significance if p-value<0.05

Chi2-test of heterogeneity

Table A5. Estimates of the effect of PM10 on the event day (Lag = 0 days) and 6 previous days on emergency hospital admissions due to cardiovascular causes (calculated using polynomial lag models). The effects are given as % change in the number of cases (with 95%-confidence intervals) for a 10 µg/m³ increase in the pollutant level on the respective day for different age groups

Cause	Age group	Lag (days)	Relative risk	95% CI (Rel. risk)	% change in number of cases	95% CI (% change)	Heterogeneity test p-value ^{s#}
Cardiovascular	All age groups	0	1.00554	1.00236 to 1.00872	0.55363	0.23613 to 0.87212	0.8547
		1	1.00050	0.99877 to 1.00223	0.05040	-0.1220 to 0.22314	
		2	0.99902	0.99709 to 1.00095	-0.09751	-0.2900 to 0.09539	
		3	0.99953	0.99823 to 1.00082	-0.04718	-0.1764 to 0.08230	
		4	1.00046	0.99870 to 1.00221	0.04602	-0.1294 to 0.22184	
		5	1.00027	0.99865 to 1.00188	0.02661	-0.1348 to 0.18835	
		6	0.99739	0.99464 to 1.00014	-0.26053	-0.5352 to 0.01496	
	15 to 64	0	1.00561	0.99960 to 1.01164	0.56065	-0.0395 to 1.16448	0.8989
		1	1.00202	0.99875 to 1.00530	0.20235	-0.1247 to 0.53047	
		2	0.99989	0.99624 to 1.00355	-0.01065	-0.3755 to 0.35559	
		3	0.99883	0.99638 to 1.00128	-0.11714	-0.3617 to 0.12809	
		4	0.99845	0.99512 to 1.00177	-0.15532	-0.4870 to 0.17748	
		5	0.99837	0.99531 to 1.00143	-0.16314	-0.4684 to 0.14309	
		6	0.99822	0.99301 to 1.00344	-0.17846	-0.6989 to 0.34472	
	≥ 65	0	1.00580	1.00202 to 1.00957	0.57964	0.20289 to 0.95779	0.8230
		1	0.99979	0.99774 to 1.00183	-0.02101	-0.2254 to 0.18384	
		2	0.99854	0.99625 to 1.00082	-0.14640	-0.3747 to 0.08245	
		3	0.99982	0.99828 to 1.00135	-0.01779	-0.1712 to 0.13592	
		4	1.00146	0.99937 to 1.00354	0.14594	-0.0625 to 0.35489	
		5	1.00125	0.99933 to 1.00317	0.12516	-0.0666 to 0.31730	
		6	0.99701	0.99375 to 1.00028	-0.29888	-0.6247 to 0.02804	
	≥ 75	0	1.00515	1.00057 to 1.00974	0.51504	0.05745 to 0.97472	0.7593
		1	1.00129	0.99880 to 1.00378	0.12897	-0.1198 to 0.37845	
		2	1.00005	0.99727 to 1.00283	0.00507	-0.2729 to 0.28383	
		3	1.00027	0.99840 to 1.00214	0.02714	-0.1594 to 0.21409	
		4	1.00080	0.99826 to 1.00334	0.07998	-0.1737 to 0.33435	
		5	1.00048	0.99815 to 1.00282	0.04838	-0.1849 to 0.28225	
		6	0.99817	0.99420 to 1.00215	-0.18256	-0.5794 to 0.21589	

Statistical significance if p-value<0.05

Chi2-test of heterogeneity

Table A6. Estimates of the effect of PM10 on the event day (Lag = 0 days) and 6 previous days on emergency hospital admissions due to respiratory causes (calculated using polynomial lag models). The effects are given as % change in the number of cases (with 95%-confidence intervals) for a 10 µg/m³ increase in the pollutant level on the respective day for different age groups

Cause	Age group	Lag (days)	Relative risk	95% CI (Rel. risk)	% change in number of cases	95% CI (% change)	Heterogeneity test p-value ^{s#}
Respiratory	All age groups	0	0.99795	0.99373 to 1.00217	-0.20543	-0.6263 to 0.21725	0.1437
		1	0.99932	0.99701 to 1.00162	-0.06807	-0.2983 to 0.16273	
		2	1.00048	0.99790 to 1.00304	0.04755	-0.2092 to 0.30498	
		3	1.00132	0.99961 to 1.00302	0.13166	-0.0389 to 0.30259	
		4	1.00174	0.99941 to 1.00407	0.17447	-0.0584 to 0.40789	
		5	1.00166	0.99951 to 1.00381	0.16623	-0.0488 to 0.38176	
		6	1.00097	0.99729 to 1.00465	0.09726	-0.2700 to 0.46593	
	15 to 64	0	1.00042	0.99301 to 1.00788	0.04241	-0.6984 to 0.78879	0.6826
		1	0.99979	0.99574 to 1.00383	-0.02136	-0.4250 to 0.38394	
		2	1.00084	0.99632 to 1.00538	0.08423	-0.3677 to 0.53820	
		3	1.00244	0.99942 to 1.00545	0.24372	-0.0576 to 0.54595	
		4	1.00341	0.99929 to 1.00754	0.34130	-0.0706 to 0.75496	
		5	1.00261	0.99881 to 1.00641	0.26078	-0.1181 to 0.64111	
		6	0.99887	0.99242 to 1.00536	-0.11297	-0.7578 to 0.53605	
	≥ 65	0	0.99719	0.99115 to 1.00325	-0.28094	-0.8840 to 0.32581	0.6140
		1	1.00054	0.99722 to 1.00385	0.05350	-0.2770 to 0.38517	
		2	1.00191	0.99821 to 1.00561	0.19069	-0.1785 to 0.56130	
		3	1.00218	0.99972 to 1.00463	0.21783	-0.0272 to 0.46350	
		4	1.00223	0.99888 to 1.00558	0.22290	-0.1113 to 0.55829	
		5	1.00294	0.99985 to 1.00603	0.29398	-0.0146 to 0.60358	
		6	1.00520	0.99991 to 1.01050	0.51952	-0.0084 to 1.05024	
	≥ 75	0	1.00113	0.99378 to 1.00853	0.11304	-0.6217 to 0.85329	0.5470
		1	1.00061	0.99659 to 1.00464	0.06092	-0.3406 to 0.46415	
		2	1.00079	0.99630 to 1.00529	0.07922	-0.3694 to 0.52996	
		3	1.00153	0.99855 to 1.00452	0.15336	-0.1446 to 0.45225	
		4	1.00269	0.99861 to 1.00677	0.26883	-0.1380 to 0.67734	
		5	1.00411	1.00035 to 1.00788	0.41109	0.03531 to 0.78827	
		6	1.00566	0.99923 to 1.01211	0.56559	-0.0766 to 1.21199	

Statistical significance if p-value<0.05

[#] Chi2-test of heterogeneity

Table A7. Difference between summer and winter effects of a 10 µg/m³ increase in PM10 on emergency hospital admissions due to medical causes (all age groups).

Cause (Age group)	PM10 exposition	Season*	Regression coefficient	95% CI (Coefficient)	Relative risk	95% CI (Rel. risk)	% change in number of cases	95% CI (% change)	p-value ^s	Heterogeneity test ^{ss} p-value
Medical (All ages)	Lag 0 days	Summer	0.00020	-0.0000 to 0.00047	1.00200	0.99924 to 1.00476	0.20019	-0.0756 to 0.47682	0.9336	0.5213
		Winter	0.00021	0.00006 to 0.00036	1.00213	1.00062 to 1.00364	0.21319	0.06226 to 0.36434		
	Lag 1 days	Summer	0.00025	-0.0000 to 0.00052	1.00246	0.99970 to 1.00523	0.24625	-0.0299 to 0.52325	0.2202	0.6043
		Winter	0.00006	-0.0000 to 0.00020	1.00055	0.99903 to 1.00207	0.05529	-0.0967 to 0.20760		
	Lag 2 days	Summer	0.00023	-0.0001 to 0.00057	1.00233	0.99888 to 1.00578	0.23310	-0.1115 to 0.57892	0.6911	0.0403
		Winter	0.00016	-0.0002 to 0.00056	1.00164	0.99766 to 1.00564	0.16447	-0.2336 to 0.56416		
	Lag 3 days	Summer	0.00024	-0.0002 to 0.00077	1.00242	0.99704 to 1.00782	0.24219	-0.2952 to 0.78253	0.8124	0.0173
		Winter	0.00018	-0.0000 to 0.00043	1.00178	0.99917 to 1.00439	0.17822	-0.0823 to 0.43951		
	2 days average	Summer	0.00027	-0.0000 to 0.00057	1.00270	0.99967 to 1.00572	0.26959	-0.0327 to 0.57284	0.5151	0.5261
		Winter	0.00016	-5.1968 to 0.00032	1.00159	0.99994 to 1.00323	0.15888	-0.0051 to 0.32322		
	3 days average	Summer	0.00033	6.53585 to 0.00064	1.00328	1.00006 to 1.00650	0.32824	0.00653 to 0.65097	0.5414	0.3489
		Winter	0.00022	0.00004 to 0.00039	1.00218	1.00044 to 1.00391	0.21770	0.04455 to 0.39114		
	4 days average	Summer	0.00041	-0.0001 to 0.00098	1.00407	0.99828 to 1.00988	0.40695	-0.1713 to 0.98861	0.5416	0.0934
		Winter	0.00021	-0.0001 to 0.00056	1.00211	0.99859 to 1.00563	0.21075	-0.1406 to 0.56334		
	7 days average	Summer	0.00031	-0.0000 to 0.00069	1.00308	0.99921 to 1.00696	0.30816	-0.0786 to 0.69647	0.9330	0.1297
		Winter	0.00033	0.00013 to 0.00051	1.00326	1.00133 to 1.00519	0.32636	0.13378 to 0.51929		

* Summer = May to October, Winter = November to April

^s p-value for the test in the difference between summer and winter^{ss} Chi²-test of heterogeneity

Table A8. Difference between summer and winter effects of a 10 µg/m³ increase in PM10 on emergency hospital admissions due to medical causes (15 to 64 years old).

Cause (Age group)	PM10 exposition	Season*	Regression coefficient	95% CI (Coefficient)	Relative risk	95% CI (Rel. risk)	% change in number of cases	95% CI (% change)	p-value ^s	Heterogeneity test ^{ss} p-value
Medical (15 to 64)	Lag 0 days	Summer	0.00021	-0.0001 to 0.00056	1.00208	0.99848 to 1.00568	0.20803	-0.1514 to 0.56882	0.7339	0.7305
		Winter	0.00028	0.00007 to 0.00048	1.00277	1.00073 to 1.00481	0.27728	0.07372 to 0.48123		
	Lag 1 days	Summer	0.00043	0.00006 to 0.00078	1.00427	1.00067 to 1.00788	0.42721	0.06744 to 0.78827	0.1526	0.8276
		Winter	0.00014	-0.0000 to 0.00034	1.00136	0.99931 to 1.00341	0.13637	-0.0686 to 0.34178		
	Lag 2 days	Summer	0.00037	0.00002 to 0.00072	1.00371	1.00020 to 1.00723	0.37121	0.02015 to 0.72350	0.5481	0.2856
		Winter	0.00025	0.00005 to 0.00044	1.00251	1.00053 to 1.00450	0.25139	0.05309 to 0.45008		
	Lag 3 days	Summer	0.00025	-0.0000 to 0.00059	1.00253	0.99906 to 1.00600	0.25292	-0.0932 to 0.60029	0.8608	0.1534
		Winter	0.00022	0.00003 to 0.00039	1.00219	1.00037 to 1.00399	0.21850	0.03739 to 0.39993		
	2 days average	Summer	0.00038	-0.0000 to 0.00077	1.00382	0.99989 to 1.00776	0.38231	-0.0100 to 0.77618	0.5314	0.7594
		Winter	0.00024	0.00002 to 0.00046	1.00244	1.00023 to 1.00465	0.24399	0.02324 to 0.46521		
	3 days average	Summer	0.00046	0.00004 to 0.00087	1.00463	1.00047 to 1.00880	0.46341	0.04796 to 0.88057	0.4768	0.6473
		Winter	0.00030	0.00006 to 0.00052	1.00297	1.00064 to 1.00529	0.29687	0.06445 to 0.52981		
	4 days average	Summer	0.00049	0.00005 to 0.00092	1.00489	1.00051 to 1.00927	0.48882	0.05198 to 0.92756	0.5224	0.3399
		Winter	0.00033	0.00009 to 0.00056	1.00331	1.00092 to 1.00570	0.33139	0.09247 to 0.57088		
	7 days average	Summer	0.00061	0.00011 to 0.00110	1.00615	1.00117 to 1.01114	0.61491	0.11755 to 1.11474	0.1686	0.1608
		Winter	0.00023	-0.0000 to 0.00048	1.00231	0.99974 to 1.00488	0.23145	-0.0254 to 0.48899		

* Summer = May to October, Winter = November to April

^s p-value for the test in the difference between summer and winter^{ss} Chi²-test of heterogeneity

Table A9. Difference between summer and winter effects of a 10 µg/m³ increase in PM10 on emergency hospital admissions due to medical causes (≥ 65 years old).

Cause (Age group)	PM10 exposition	Season*	Regression coefficient	95% CI (Coefficient)	Relative risk	95% CI (Rel. risk)	% change in number of cases	95% CI (% change)	p-value ^s	Heterogeneity test ^{ss} p-value
Medical (≥ 65)	Lag 0 days	Summer	0.00043	0.00003 to 0.00082	1.00429	1.00032 to 1.00828	0.42925	0.03201 to 0.82806	0.3416	0.9068
		Winter	0.00022	-5.1307 to 0.00043	1.00217	0.99999 to 1.00435	0.21706	-0.0005 to 0.43510		
	Lag 1 days	Summer	0.00014	-0.0002 to 0.00053	1.00136	0.99738 to 1.00535	0.13607	-0.2613 to 0.53508	0.6598	0.8874
		Winter	0.00004	-0.0001 to 0.00025	1.00038	0.99818 to 1.00257	0.03787	-0.1816 to 0.25790		
	Lag 2 days	Summer	0.00012	-0.0002 to 0.00050	1.00119	0.99730 to 1.00509	0.11942	-0.2696 to 0.50998	0.6647	0.7562
		Winter	0.00021	1.50478 to 0.00042	1.00215	1.00001 to 1.00428	0.21463	0.00150 to 0.42821		
	Lag 3 days	Summer	0.00027	-0.0001 to 0.00064	1.00266	0.99882 to 1.00650	0.26572	-0.1177 to 0.65070	0.8096	0.2387
		Winter	0.00032	0.00012 to 0.00051	1.00318	1.00123 to 1.00512	0.31773	0.12332 to 0.51250		
	2 days average	Summer	0.00034	-0.0000 to 0.00077	1.00339	0.99906 to 1.00774	0.33926	-0.0939 to 0.77438	0.4392	0.9430
		Winter	0.00015	-0.0000 to 0.00038	1.00152	0.99915 to 1.00388	0.15188	-0.0845 to 0.38884		
	3 days average	Summer	0.00032	-0.0001 to 0.00078	1.00325	0.99866 to 1.00786	0.32543	-0.1330 to 0.78603	0.6576	0.9507
		Winter	0.00021	-0.0000 to 0.00046	1.00212	0.99962 to 1.00461	0.21174	-0.0375 to 0.46167		
	4 days average	Summer	0.00039	-0.0000 to 0.00086	1.00387	0.99904 to 1.00871	0.38696	-0.0951 to 0.87144	0.7707	0.8187
		Winter	0.00031	0.00005 to 0.00056	1.00308	1.00051 to 1.00565	0.30835	0.05171 to 0.56564		
	7 days average	Summer	0.00020	-0.0003 to 0.00074	1.00199	0.99651 to 1.00749	0.19896	-0.3484 to 0.74940	0.3140	0.7175
		Winter	0.00051	0.00022 to 0.00078	1.00507	1.00229 to 1.00784	0.50672	0.22962 to 0.78458		

* Summer = May to October, Winter = November to April

^s p-value for the test in the difference between summer and winter^{ss} Chi²-test of heterogeneity

Table A10. Difference between summer and winter effects of a 10 µg/m³ increase in PM10 on emergency hospital admissions due to medical causes (≥ 75 years old).

Cause (Age group)	PM10 exposition	Season*	Regression coefficient	95% CI (Coefficient)	Relative risk	95% CI (Rel. risk)	% change in number of cases	95% CI (% change)	p-value ^s	Heterogeneity test ^{ss} p-value
Medical (≥ 75)	Lag 0 days	Summer	0.00030	-0.0001 to 0.00078	1.00305	0.99821 to 1.00790	0.30519	-0.1782 to 0.79097	0.9175	0.5611
		Winter	0.00033	0.00006 to 0.00059	1.00333	1.00069 to 1.00597	0.33335	0.06981 to 0.59758		
	Lag 1 days	Summer	0.00009	-0.0003 to 0.00057	1.00092	0.99606 to 1.00579	0.09198	-0.3931 to 0.57950	0.6805	0.9525
		Winter	0.00020	-0.0000 to 0.00046	1.00204	0.99938 to 1.00470	0.20417	-0.0618 to 0.47094		
	Lag 2 days	Summer	0.00003	-0.0004 to 0.00050	1.00029	0.99555 to 1.00505	0.02929	-0.4443 to 0.50517	0.1675	0.7914
		Winter	0.00040	0.00014 to 0.00065	1.00398	1.00140 to 1.00656	0.39818	0.14029 to 0.65673		
	Lag 3 days	Summer	0.00013	-0.0003 to 0.00059	1.00126	0.99658 to 1.00596	0.12627	-0.3414 to 0.59624	0.1737	0.5497
		Winter	0.00048	0.00024 to 0.00071	1.00484	1.00248 to 1.00720	0.48435	0.24887 to 0.72038		
	2 days average	Summer	0.00025	-0.0002 to 0.00077	1.00250	0.99721 to 1.00781	0.25000	-0.2783 to 0.78118	0.8174	0.8629
		Winter	0.00032	0.00003 to 0.00060	1.00318	1.00032 to 1.00605	0.31826	0.03201 to 0.60532		
	3 days average	Summer	0.00021	-0.0003 to 0.00076	1.00206	0.99646 to 1.00769	0.20645	-0.3536 to 0.76971	0.4975	0.9479
		Winter	0.00042	0.00011 to 0.00071	1.00419	1.00117 to 1.00721	0.41920	0.11739 to 0.72191		
	4 days average	Summer	0.00025	-0.0003 to 0.00083	1.00248	0.99658 to 1.00839	0.24765	-0.3411 to 0.83988	0.3601	0.9368
		Winter	0.00055	0.00023 to 0.00085	1.00549	1.00238 to 1.00860	0.54909	0.23870 to 0.86043		
	7 days average	Summer	0.00004	-0.0006 to 0.00070	1.00038	0.99369 to 1.00710	0.03770	-0.6308 to 0.71074	0.0431	0.9780
		Winter	0.00079	0.00045 to 0.00112	1.00793	1.00457 to 1.01129	0.79275	0.45732 to 1.12928		

* Summer = May to October, Winter = November to April

^s p-value for the test in the difference between summer and winter^{ss} Chi²-test of heterogeneity

Table A11. Difference between summer and winter effects of a 10 µg/m³ increase in PM10 on emergency hospital admissions due to cardiovascular causes (all age groups).

Cause (Age group)	PM10 exposition	Season*	Regression coefficient	95% CI (Coefficient)	Relative risk	95% CI (Rel. risk)	% change in number of cases	95% CI (% change)	p-value [§]	Heterogeneity test ^{§§} p-value
Cardiovascular (All ages)	Lag 0 days	Summer	0.00084	0.00028 to 0.00138	1.00840	1.00288 to 1.01395	0.84014	0.28823 to 1.39507	0.2839	0.3499
		Winter	0.00051	0.00020 to 0.00081	1.00509	1.00202 to 1.00816	0.50901	0.20208 to 0.81686		
	Lag 1 days	Summer	0.00011	-0.0004 to 0.00066	1.00109	0.99558 to 1.00663	0.10939	-0.4419 to 0.66378	0.7770	0.8041
		Winter	0.00020	-0.0001 to 0.00050	1.00197	0.99887 to 1.00507	0.19692	-0.1127 to 0.50751		
	Lag 2 days	Summer	-0.00002	-0.0005 to 0.00052	0.99983	0.99444 to 1.00523	-0.01734	-0.5555 to 0.52380	0.2843	0.3095
		Winter	0.00031	7.85880 to 0.00060	1.00308	1.00007 to 1.00608	0.30777	0.00785 to 0.60858		
	Lag 3 days	Summer	-0.00019	-0.0007 to 0.00034	0.99809	0.99277 to 1.00342	-0.19112	-0.7221 to 0.34279	0.2727	0.7066
		Winter	0.00014	-0.0001 to 0.00041	1.00137	0.99863 to 1.00411	0.13721	-0.1366 to 0.41185		
	2 days average	Summer	0.00057	-0.0000 to 0.00116	1.00568	0.99968 to 1.01171	0.56836	-0.0315 to 1.17182	0.6498	0.5198
		Winter	0.00042	0.00008 to 0.00074	1.00417	1.00083 to 1.00750	0.41653	0.08359 to 0.75058		
	3 days average	Summer	0.00042	-0.0002 to 0.00104	1.00418	0.99785 to 1.01055	0.41835	-0.2146 to 1.05535	0.9338	0.4550
		Winter	0.00045	0.00009 to 0.00079	1.00448	1.00097 to 1.00799	0.44770	0.09726 to 0.79936		
	4 days average	Summer	0.00027	-0.0003 to 0.00093	1.00270	0.99606 to 1.00937	0.26960	-0.3937 to 0.93736	0.7029	0.5134
		Winter	0.00041	0.00005 to 0.00076	1.00411	1.00050 to 1.00772	0.41088	0.05072 to 0.77233		
	7 days average	Summer	-0.00071	-0.0014 to 0.00004	0.99295	0.98549 to 1.00045	-0.70533	-1.4503 to 0.04531	0.0130	0.6167
		Winter	0.00033	-0.0000 to 0.00071	1.00329	0.99941 to 1.00717	0.32861	-0.0585 to 0.71724		

* Summer = May to October, Winter = November to April

§ p-value for the test in the difference between summer and winter

§§ Chi²-test of heterogeneity

Table A12. Difference between summer and winter effects of a 10 µg/m³ increase in PM10 on emergency hospital admissions due to cardiovascular causes (15 to 64 years old).

Cause (Age group)	PM10 exposition	Season*	Regression coefficient	95% CI (Coefficient)	Relative risk	95% CI (Rel. risk)	% change in number of cases	95% CI (% change)	p-value [§]	Heterogeneity test ^{§§} p-value
Cardiovascular (15 to 64)	Lag 0 days	Summer	0.00116	0.00013 to 0.00218	1.01167	1.00134 to 1.02211	1.16745	0.13408 to 2.21147	0.2428	0.3647
		Winter	0.00049	-0.0000 to 0.00106	1.00489	0.99908 to 1.01073	0.48941	-0.0911 to 1.07334		
	Lag 1 days	Summer	0.00043	-0.0006 to 0.00146	1.00430	0.99396 to 1.01473	0.42989	-0.6032 to 1.47373	0.5798	0.7814
		Winter	0.00011	-0.0004 to 0.00069	1.00108	0.99522 to 1.00697	0.10838	-0.4770 to 0.69727		
	Lag 2 days	Summer	0.00009	-0.0009 to 0.00109	1.00087	0.99078 to 1.01105	0.08657	-0.9217 to 1.10509	0.7787	0.4675
		Winter	0.00025	-0.0003 to 0.00081	1.00247	0.99680 to 1.00816	0.24696	-0.3195 to 0.81668		
	Lag 3 days	Summer	-0.00047	-0.0014 to 0.00053	0.99535	0.98543 to 1.00537	-0.46464	-1.4568 to 0.53759	0.4399	0.5894
		Winter	-0.00003	-0.0005 to 0.00048	0.99969	0.99452 to 1.00489	-0.03072	-0.5479 to 0.48917		
	2 days average	Summer	0.00094	-0.0001 to 0.00206	1.00949	0.99824 to 1.02084	0.94856	-0.1751 to 2.08488	0.3446	0.4610
		Winter	0.00035	-0.0002 to 0.00098	1.00355	0.99725 to 1.00987	0.35481	-0.2742 to 0.98787		
	3 days average	Summer	0.00074	-0.0004 to 0.00192	1.00744	0.99557 to 1.01943	0.74364	-0.4424 to 1.94381	0.5771	0.4499
		Winter	0.00037	-0.0002 to 0.00103	1.00374	0.99711 to 1.01039	0.37358	-0.2880 to 1.03961		
	4 days average	Summer	0.00042	-0.0008 to 0.00166	1.00422	0.99180 to 1.01679	0.42229	-0.8194 to 1.67954	0.8319	0.4670
		Winter	0.00027	-0.0004 to 0.00095	1.00275	0.99595 to 1.00958	0.27463	-0.4047 to 0.95866		
	7 days average	Summer	-0.00061	-0.0020 to 0.00080	0.99391	0.97997 to 1.00805	-0.60882	-2.0028 to 0.80504	0.4667	0.2952
		Winter	-0.00004	-0.0007 to 0.00069	0.99959	0.99231 to 1.00692	-0.04051	-0.7686 to 0.69298		

* Summer = May to October, Winter = November to April

§ p-value for the test in the difference between summer and winter

§§ Chi²-test of heterogeneity

Table A13. Difference between summer and winter effects of a 10 µg/m³ increase in PM10 on emergency hospital admissions due to cardiovascular causes (≥ 65 years old).

Cause (Age group)	PM10 exposition	Season*	Regression coefficient	95% CI (Coefficient)	Relative risk	95% CI (Rel. risk)	% change in number of cases	95% CI (% change)	p-value [§]	Heterogeneity test ^{§§} p-value
Cardiovascular (≥ 65)	Lag 0 days	Summer	0.00076	0.00010 to 0.00141	1.00762	1.00105 to 1.01422	0.76213	0.10563 to 1.42293	0.5293	0.5549
		Winter	0.00053	0.00016 to 0.00089	1.00531	1.00167 to 1.00895	0.53090	0.16721 to 0.89590		
	Lag 1 days	Summer	-0.00001	-0.0006 to 0.00065	0.99994	0.99339 to 1.00653	-0.00574	-0.6609 to 0.65381	0.4956	0.7076
		Winter	0.00024	-0.0001 to 0.00061	1.00245	0.99877 to 1.00612	0.24461	-0.1221 to 0.61274		
	Lag 2 days	Summer	-0.00001	-0.0006 to 0.00062	0.99986	0.99346 to 1.00630	-0.01371	-0.6536 to 0.63031	0.3341	0.5235
		Winter	0.00033	-0.0000 to 0.00068	1.00335	0.99979 to 1.00691	0.33492	-0.0205 to 0.69163		
	Lag 3 days	Summer	0.00000	-0.0006 to 0.00063	0.99999	0.99366 to 1.00635	-0.00105	-0.6335 to 0.63545	0.5433	0.6561
		Winter	0.00022	-0.0001 to 0.00053	1.00215	0.99890 to 1.00541	0.21545	-0.1091 to 0.54111		
	2 days average	Summer	0.00045	-0.0002 to 0.00116	1.00452	0.99739 to 1.01170	0.45221	-0.2609 to 1.17042	0.9911	0.6879
		Winter	0.00046	0.00006 to 0.00084	1.00457	1.00062 to 1.00852	0.45663	0.06220 to 0.85261		
	3 days average	Summer	0.00033	-0.0004 to 0.00108	1.00333	0.99580 to 1.01090	0.33258	-0.4197 to 1.09064	0.7086	0.6533
		Winter	0.00049	0.00007 to 0.00090	1.00490	1.00074 to 1.00906	0.48954	0.07441 to 0.90639		
	4 days average	Summer	0.00027	-0.0005 to 0.00106	1.00273	0.99484 to 1.01068	0.27333	-0.5154 to 1.06841	0.6383	0.6406
		Winter	0.00048	0.00005 to 0.00090	1.00480	1.00053 to 1.00908	0.48036	0.05375 to 0.90879		
	7 days average	Summer	-0.00066	-0.0015 to 0.00023	0.99346	0.98459 to 1.00239	-0.65412	-1.5402 to 0.23997	0.0190	0.7885
		Winter	0.00051	0.00004 to 0.00096	1.00507	1.00048 to 1.00968	0.50730	0.04869 to 0.96800		

* Summer = May to October, Winter = November to April

§ p-value for the test in the difference between summer and winter

§§ Chi²-test of heterogeneity

Table A14. Difference between summer and winter effects of a 10 µg/m³ increase in PM10 on emergency hospital admissions due to cardiovascular causes (≥ 75 years old).

Cause (Age group)	PM10 exposition	Season*	Regression coefficient	95% CI (Coefficient)	Relative risk	95% CI (Rel. risk)	% change in number of cases	95% CI (% change)	p-value [§]	Heterogeneity test ^{§§} p-value
Cardiovascular (≥ 75)	Lag 0 days	Summer	0.00046	-0.0003 to 0.00125	1.00461	0.99664 to 1.01263	0.46111	-0.3350 to 1.26360	0.5725	0.8082
		Winter	0.00071	0.00027 to 0.00115	1.00713	1.00271 to 1.01156	0.71327	0.27174 to 1.15674		
	Lag 1 days	Summer	0.00008	-0.0007 to 0.00087	1.00081	0.99285 to 1.00883	0.08121	-0.7148 to 0.88364	0.2806	0.3022
		Winter	0.00056	0.00011 to 0.00100	1.00563	1.00118 to 1.01010	0.56349	0.11834 to 1.01061		
	Lag 2 days	Summer	0.00007	-0.0007 to 0.00084	1.00066	0.99288 to 1.00850	0.06616	-0.7118 to 0.85027	0.2462	0.3514
		Winter	0.00057	0.00014 to 0.00100	1.00575	1.00143 to 1.01008	0.57548	0.14388 to 1.00894		
	Lag 3 days	Summer	0.00002	-0.0007 to 0.00079	1.00020	0.99250 to 1.00794	0.01961	-0.7497 to 0.79490	0.4120	0.5178
		Winter	0.00037	-0.0000 to 0.00076	1.00375	0.99981 to 1.00771	0.37537	-0.0189 to 0.77125		
	2 days average	Summer	0.00033	-0.0005 to 0.00119	1.00327	0.99461 to 1.01199	0.32664	-0.5386 to 1.19947	0.3857	0.6022
		Winter	0.00074	0.00026 to 0.00121	1.00746	1.00267 to 1.01226	0.74614	0.26759 to 1.22697		
	3 days average	Summer	0.00028	-0.0006 to 0.00119	1.00277	0.99363 to 1.01198	0.27693	-0.6363 to 1.19863	0.2945	0.5692
		Winter	0.00081	0.00030 to 0.00130	1.00812	1.00308 to 1.01318	0.81236	0.30875 to 1.31850		
	4 days average	Summer	0.00023	-0.0007 to 0.00119	1.00234	0.99276 to 1.01201	0.23424	-0.7235 to 1.20124	0.2862	0.5615
		Winter	0.00080	0.00028 to 0.00131	1.00806	1.00288 to 1.01325	0.80569	0.28809 to 1.32594		
	7 days average	Summer	-0.00080	-0.0018 to 0.00028	0.99201	0.98126 to 1.00286	-0.79925	-1.8736 to 0.28693	0.0076	0.5470
		Winter	0.00080	0.00025 to 0.00135	1.00808	1.00251 to 1.01367	0.80792	0.25163 to 1.36729		

* Summer = May to October, Winter = November to April

§ p-value for the test in the difference between summer and winter

§§ Chi²-test of heterogeneity

Table A15. Difference between summer and winter effects of a 10 µg/m³ increase in PM10 on emergency hospital admissions due to respiratory causes (all age groups).

Cause (Age group)	PM10 exposition	Season*	Regression coefficient	95% CI (Coefficient)	Relative risk	95% CI (Rel. risk)	% change in number of cases	95% CI (% change)	p-value ^s	Heterogeneity test ^{ss} p-value
Respiratory (All ages)	Lag 0 days	Summer	0.00001	-0.0008 to 0.00090	1.00014	0.99124 to 1.00910	0.01355	-0.8754 to 0.91050	0.7340	0.2793
		Winter	-0.00015	-0.0005 to 0.00025	0.99847	0.99443 to 1.00252	-0.15280	-0.5567 to 0.25278		
	Lag 1 days	Summer	0.00090	9.92359 to 0.00179	1.00906	1.00009 to 1.01809	0.90592	0.00992 to 1.80994	0.0194	0.3203
		Winter	-0.00024	-0.0006 to 0.00016	0.99760	0.99353 to 1.00168	-0.23999	-0.6463 to 0.16803		
	Lag 2 days	Summer	0.00134	0.00017 to 0.00250	1.01350	1.00171 to 1.02541	1.34985	0.17186 to 2.54167	0.0703	0.0151
		Winter	-0.00013	-0.0009 to 0.00067	0.99867	0.99065 to 1.00673	-0.13349	-0.9343 to 0.67385		
	Lag 3 days	Summer	0.00132	0.00046 to 0.00218	1.01333	1.00464 to 1.02210	1.33343	0.46402 to 2.21036	0.0162	0.1379
		Winter	0.00019	-0.0001 to 0.00055	1.00193	0.99835 to 1.00551	0.19303	-0.1641 to 0.55154		
	2 days average	Summer	0.00055	-0.0004 to 0.00152	1.00550	0.99568 to 1.01540	0.54969	-0.4313 to 1.54040	0.1470	0.2686
		Winter	-0.00023	-0.0006 to 0.00021	0.99771	0.99331 to 1.00212	-0.22911	-0.6683 to 0.21207		
	3 days average	Summer	0.00099	-0.0000 to 0.00204	1.00999	0.99946 to 1.02063	0.99948	-0.0533 to 2.06344	0.0349	0.1071
		Winter	-0.00021	-0.0006 to 0.00025	0.99786	0.99322 to 1.00251	-0.21390	-0.6775 to 0.25186		
	4 days average	Summer	0.00150	0.00036 to 0.00263	1.01509	1.00361 to 1.02669	1.50926	0.36189 to 2.66974	0.0232	0.0697
		Winter	-0.00021	-0.0010 to 0.00058	0.99787	0.98995 to 1.00584	-0.21336	-1.0049 to 0.58451		
	7 days average	Summer	0.00172	-0.0004 to 0.00386	1.01733	0.99569 to 1.03944	1.73319	-0.4307 to 3.94416	0.2006	0.0017
		Winter	0.00006	-0.0010 to 0.00120	1.00061	0.98922 to 1.01212	0.06088	-1.0778 to 1.21276		

* Summer = May to October, Winter = November to April

^s p-value for the test in the difference between summer and winter^{ss} Chi²-test of heterogeneity

Table A16. Difference between summer and winter effects of a 10 µg/m³ increase in PM10 on emergency hospital admissions due to respiratory causes (15 to 64 years old).

Cause (Age group)	PM10 exposition	Season*	Regression coefficient	95% CI (Coefficient)	Relative risk	95% CI (Rel. risk)	% change in number of cases	95% CI (% change)	p-value ^s	Heterogeneity test ^{ss} p-value
Respiratory (15 to 64)	Lag 0 days	Summer	0.00208	0.00067 to 0.00349	1.02106	1.00674 to 1.03558	2.10619	0.67432 to 3.55842	0.0041	0.4010
		Winter	-0.00015	-0.0008 to 0.00055	0.99852	0.99149 to 1.00559	-0.14806	-0.8501 to 0.55902		
	Lag 1 days	Summer	0.00250	0.00110 to 0.00390	1.02537	1.01114 to 1.03978	2.53656	1.11455 to 3.97855	0.0008	0.5760
		Winter	-0.00005	-0.0007 to 0.00065	0.99946	0.99242 to 1.00653	-0.05430	-0.7573 to 0.65374		
	Lag 2 days	Summer	0.00303	0.00166 to 0.00438	1.03073	1.01679 to 1.04486	3.07338	1.67927 to 4.48660	0.0000	0.1292
		Winter	-0.00016	-0.0008 to 0.00052	0.99844	0.99163 to 1.00529	-0.15575	-0.8363 to 0.52953		
	Lag 3 days	Summer	0.00323	0.00188 to 0.00456	1.03278	1.01898 to 1.04675	3.27778	1.89824 to 4.67599	0.0000	0.9794
		Winter	0.00020	-0.0004 to 0.00082	1.00203	0.99583 to 1.00826	0.20285	-0.4168 to 0.82637		
	2 days average	Summer	0.00268	0.00116 to 0.00420	1.02721	1.01167 to 1.04298	2.72108	1.16791 to 4.29809	0.0008	0.4927
		Winter	-0.00013	-0.0008 to 0.00063	0.99874	0.99115 to 1.00637	-0.12639	-0.8842 to 0.63726		
	3 days average	Summer	0.00340	0.00179 to 0.00500	1.03462	1.01815 to 1.05136	3.46237	1.81523 to 5.13615	0.0000	0.5515
		Winter	-0.00017	-0.0009 to 0.00063	0.99834	0.99038 to 1.00636	-0.16557	-0.9610 to 0.63628		
	4 days average	Summer	0.00420	0.00252 to 0.00587	1.04293	1.02561 to 1.06054	4.29317	2.56127 to 6.05430	0.0000	0.8740
		Winter	-0.00001	-0.0008 to 0.00080	0.99992	0.99178 to 1.00811	-0.00820	-0.8216 to 0.81187		
	7 days average	Summer	0.00507	0.00317 to 0.00696	1.05203	1.03227 to 1.07217	5.20347	3.22763 to 7.21711	0.0000	0.8928
		Winter	0.00016	-0.0007 to 0.00103	1.00163	0.99292 to 1.01040	0.16269	-0.7078 to 1.04086		

* Summer = May to October, Winter = November to April

^s p-value for the test in the difference between summer and winter^{ss} Chi²-test of heterogeneity

Table A17. Difference between summer and winter effects of a 10 µg/m³ increase in PM10 on emergency hospital admissions due to respiratory causes (≥ 65 years old).

Cause (Age group)	PM10 exposition	Season*	Regression coefficient	95% CI (Coefficient)	Relative risk	95% CI (Rel. risk)	% change in number of cases	95% CI (% change)	p-value ^s	Heterogeneity test ^{ss} p-value
Respiratory (≥ 65)	Lag 0 days	Summer	-0.00059	-0.0018 to 0.00070	0.99412	0.98136 to 1.00705	-0.58754	-1.8637 to 0.70525	0.3191	0.2290
		Winter	0.00011	-0.0004 to 0.00069	1.00114	0.99537 to 1.00694	0.11447	-0.4623 to 0.69463		
	Lag 1 days	Summer	0.00070	-0.0005 to 0.00198	1.00701	0.99411 to 1.02006	0.70055	-0.5883 to 2.00614	0.4434	0.5584
		Winter	0.00016	-0.0004 to 0.00074	1.00159	0.99577 to 1.00744	0.15914	-0.4229 to 0.74465		
	Lag 2 days	Summer	0.00055	-0.0007 to 0.00182	1.00556	0.99289 to 1.01839	0.55631	-0.7102 to 1.83905	0.8473	0.4199
		Winter	0.00042	-0.0001 to 0.00098	1.00422	0.99858 to 1.00989	0.42208	-0.1419 to 0.98929		
	Lag 3 days	Summer	0.00098	-0.0002 to 0.00222	1.00981	0.99727 to 1.02250	0.98099	-0.2727 to 2.25047	0.7267	0.3129
		Winter	0.00074	0.00022 to 0.00124	1.00741	1.00229 to 1.01255	0.74102	0.22927 to 1.25537		
	2 days average	Summer	0.00005	-0.0013 to 0.00146	1.00047	0.98639 to 1.01474	0.04699	-1.3600 to 1.47413	0.8827	0.3762
		Winter	0.00016	-0.0004 to 0.00078	1.00161	0.99532 to 1.00793	0.16102	-0.4670 to 0.79309		
	3 days average	Summer	0.00029	-0.0012 to 0.00179	1.00287	0.98781 to 1.01815	0.28710	-1.2186 to 1.81581	0.9698	0.3422
		Winter	0.00032	-0.0003 to 0.00098	1.00318	0.99654 to 1.00986	0.31844	-0.3451 to 0.98647		
	4 days average	Summer	0.00066	-0.0009 to 0.00225	1.00657	0.99058 to 1.02281	0.65724	-0.9415 to 2.28179	0.9413	0.2088
		Winter	0.00059	-0.0000 to 0.00127	1.00593	0.99909 to 1.01280	0.59266	-0.0907 to 1.28076		
	7 days average	Summer	0.00071	-0.0011 to 0.00254	1.00712	0.98878 to 1.02578	0.71191	-1.1210 to 2.57887	0.5957	0.0669
		Winter	0.00127	0.00020 to 0.00233	1.01279	1.00204 to 1.02364	1.27878	0.20427 to 2.36481		

* Summer = May to October, Winter = November to April

^s p-value for the test in the difference between summer and winter^{ss} Chi²-test of heterogeneity

Table A18. Difference between summer and winter effects of a 10 µg/m³ increase in PM10 on emergency hospital admissions due to respiratory causes (≥ 75 years old).

Cause (Age group)	PM10 exposition	Season*	Regression coefficient	95% CI (Coefficient)	Relative risk	95% CI (Rel. risk)	% change in number of cases	95% CI (% change)	p-value ^s	Heterogeneity test ^{ss} p-value
Respiratory (≥ 75)	Lag 0 days	Summer	-0.00018	-0.0017 to 0.00139	0.99820	0.98255 to 1.01408	-0.18031	-1.7441 to 1.40844	0.3911	0.1132
		Winter	0.00056	-0.0001 to 0.00125	1.00560	0.99861 to 1.01263	0.56023	-0.1381 to 1.26353		
	Lag 1 days	Summer	0.00048	-0.0011 to 0.00206	1.00482	0.98905 to 1.02084	0.48197	-1.0949 to 2.08407	0.8155	0.7637
		Winter	0.00028	-0.0004 to 0.00098	1.00280	0.99574 to 1.00990	0.27995	-0.4256 to 0.99054		
	Lag 2days	Summer	0.00078	-0.0007 to 0.00232	1.00780	0.99228 to 1.02356	0.78030	-0.7719 to 2.35677	0.8197	0.2717
		Winter	0.00058	-0.0000 to 0.00126	1.00586	0.99901 to 1.01274	0.58567	-0.0981 to 1.27421		
	Lag 3 days	Summer	0.00124	-0.0010 to 0.00356	1.01244	0.98917 to 1.03625	1.24396	-1.0829 to 3.62566	0.7935	0.0625
		Winter	0.00085	-0.0000 to 0.00172	1.00856	0.99976 to 1.01742	0.85568	-0.0236 to 1.74271		
	2 days average	Summer	0.00016	-0.0015 to 0.00189	1.00164	0.98441 to 1.01916	0.16399	-1.5588 to 1.91696	0.7255	0.3464
		Winter	0.00050	-0.0002 to 0.00125	1.00497	0.99735 to 1.01263	0.49655	-0.2641 to 1.26304		
	3 days average	Summer	0.00048	-0.0013 to 0.00233	1.00483	0.98638 to 1.02360	0.48270	-1.3611 to 2.36099	0.8757	0.2142
		Winter	0.00064	-0.0001 to 0.00144	1.00641	0.99837 to 1.01451	0.64119	-0.1625 to 1.45137		
	4 days average	Summer	0.00135	-0.0013 to 0.00404	1.01356	0.98659 to 1.04126	1.35620	-1.3400 to 4.12616	0.7954	0.0626
		Winter	0.00099	0.00015 to 0.00182	1.00994	1.00154 to 1.01840	0.99427	0.15470 to 1.84087		
	7 days average	Summer	0.00111	-0.0022 to 0.00447	1.01114	0.97768 to 1.04573	1.11358	-2.2319 to 4.57356	0.7541	0.0189
		Winter	0.00172	0.00033 to 0.00309	1.01730	1.00335 to 1.03143	1.72987	0.33535 to 3.14376		

* Summer = May to October, Winter = November to April

^s p-value for the test in the difference between summer and winter^{ss} Chi²-test of heterogeneity

Table A19. Meta-analytic coefficients for a linear and a quadratic trend of the effect of PM10 and NO₂ on mortality.

Pollutant	Age group	Cause of death	Linear trend				Quadratic trend			
			Combined trend coefficient (per 10 years)	95% confidence interval	p-value	p-value for heterogeneity	Combined trend coefficient (per 10 years)	95% confidence interval	p-value	p-value for heterogeneity
NO ₂	all	medical	0.9996	0.9990-1.0001	0.092	0.378	1.0000	0.9999-1.0001	0.760	0.845
		respiratory	0.9979	0.9959-1.0000	0.052	0.852	0.9997	0.9991-1.0004	0.415	0.001
		cardiovascular	0.9999	0.9992-1.0006	0.752	0.556	1.0000	0.9998-1.0001	0.562	0.891
	≥65	medical	0.9993	0.9988-0.9999	0.016	0.699	1.0000	0.9999-1.0000	0.332	0.806
		respiratory	0.9977	0.9956-0.9998	0.029	0.606	0.9998	0.9991-1.0005	0.631	0.002
		cardiovascular	0.9997	0.9990-1.0004	0.410	0.444	0.9999	0.9998-1.0001	0.281	0.681
	≥75	medical	0.9993	0.9986-1.0001	0.070	0.237	0.9999	0.9998-1.0001	0.335	0.582
		respiratory	0.9983	0.9960-1.0007	0.172	0.694	0.9998	0.9989-1.0007	0.612	0.011
		cardiovascular	0.9995	0.9986-1.0004	0.299	0.331	0.9999	0.9998-1.0001	0.241	0.534
PM10	all	medical	1.0001	0.9992-1.0010	0.783	0.979	1.0000	0.9998-1.0003	0.845	0.615
		respiratory	1.0021	0.9986-1.0057	0.238	0.470	1.0000	0.9990-1.0011	0.986	0.079
		cardiovascular	1.0013	1.0000-1.0027	0.054	0.862	1.0003	0.9999-1.0006	0.173	0.655
	≥65	medical	1.0000	0.9991-1.0010	0.967	0.996	0.9999	0.9996-1.0002	0.447	0.735
		respiratory	1.0032	0.9995-1.0069	0.086	0.484	1.0001	0.9989-1.0013	0.895	0.05
		cardiovascular	1.0011	0.9996-1.0025	0.140	0.868	1.0001	0.9997-1.0005	0.494	0.378
	≥75	medical	0.9999	0.9989-1.0010	0.922	0.853	0.9999	0.9996-1.0002	0.393	0.602
		respiratory	1.0018	0.9972-1.0064	0.438	0.232	0.9994	0.9978-1.0010	0.449	0.056
		cardiovascular	1.0013	0.9998-1.0028	0.097	0.806	0.9998	0.9994-1.0003	0.441	0.534

Table A20. Estimates of the parallel effects of PM10 and of NO₂ loads on the event day (Lag = 0 days) and 6 previous days on emergency hospital admissions due to medical causes (calculated using polynomial distributed lag models). The effects are given as % change in the number of cases (with 95%-confidence intervals) for a 10 µg/m³ increase in the pollutant level of the respective day for different age groups

Cause	Age group	Lag (days)	PM10 load (one pollutant model)			PM10 load (two pollutant model, PM10 and NO ₂)			NO ₂ load (two pollutant model, PM10 and NO ₂)		
			Relative risk	95% CI (Rel. risk)	Heterogeneity test p-value ^{s#}	Relative risk	95% CI (Rel. risk)	Heterogeneity test p-value ^{s#}	Relative risk	95% CI (Rel. risk)	Heterogeneity test p-value ^{s#}
Medical	All age groups	0	1.00119	0.99966 to 1.00272	0.1241	0.99718	0.99532 to 0.99903	0.5207	1.00865	1.00645 to 1.01084	0.3588
		1	1.00014	0.99931 to 1.00097		1.00166	1.00061 to 1.00270		0.99688	0.99562 to 0.99814	
		2	1.00013	0.99920 to 1.00106		1.00254	1.00139 to 1.00368		0.99499	0.99365 to 0.99632	
		3	1.00061	0.99998 to 1.00123		1.00137	1.00055 to 1.00218		0.99843	0.99742 to 0.99944	
		4	1.00102	1.00017 to 1.00186		0.99971	0.99863 to 1.00078		1.00278	1.00150 to 1.00405	
		5	1.00080	1.00002 to 1.00158		0.99911	0.99811 to 1.00009		1.00355	1.00234 to 1.00475	
		6	0.99942	0.99808 to 1.00075		1.00112	0.99941 to 1.00283		0.99626	0.99424 to 0.99828	
	15 to 64	0	1.00113	0.99905 to 1.00320	0.4228	0.99720	0.99468 to 0.99970	0.4555	1.00813	1.00520 to 1.01107	0.6492
		1	1.00087	0.99974 to 1.00199		1.00257	1.00115 to 1.00398		0.99644	0.99475 to 0.99811	
		2	1.00078	0.99952 to 1.00204		1.00334	1.00178 to 1.00489		0.99473	0.99295 to 0.99651	
		3	1.00072	0.99987 to 1.00156		1.00151	1.00041 to 1.00261		0.99842	0.99708 to 0.99976	
		4	1.00054	0.99939 to 1.00168		0.99913	0.99767 to 1.00058		1.00301	1.00130 to 1.00472	
		5	1.00010	0.99905 to 1.00116		0.99822	0.99687 to 0.99955		1.00394	1.00233 to 1.00554	
		6	0.99927	0.99747 to 1.00107		1.00079	0.99848 to 1.00310		0.99666	0.99395 to 0.99937	
	≥ 65	0	1.00233	1.00010 to 1.00456	0.6926	0.99770	0.99500 to 1.00040	0.5823	1.00969	1.00649 to 1.01288	0.4204
		1	0.99918	0.99796 to 1.00039		1.00082	0.99930 to 1.00234		0.99692	0.99508 to 0.99875	
		2	0.99915	0.99779 to 1.00050		1.00161	0.99994 to 1.00327		0.99513	0.99319 to 0.99707	
		3	1.00068	0.99976 to 1.00158		1.00106	0.99988 to 1.00224		0.99913	0.99766 to 1.00059	
		4	1.00219	1.00095 to 1.00342		1.00021	0.99864 to 1.00177		1.00382	1.00196 to 1.00567	
		5	1.00211	1.00097 to 1.00324		1.00006	0.99861 to 1.00150		1.00403	1.00228 to 1.00577	
		6	0.99887	0.99693 to 1.00081		1.00163	0.99913 to 1.00412		0.99464	0.99171 to 0.99757	
	≥ 75	0	1.00229	0.99958 to 1.00499	0.4786	0.99708	0.99381 to 1.00036	0.6380	1.01043	1.00657 to 1.01429	0.3337
		1	0.99971	0.99824 to 1.00118		1.00085	0.99901 to 1.00269		0.99806	0.99584 to 1.00027	
		2	0.99971	0.99806 to 1.00135		1.00184	0.99981 to 1.00386		0.99590	0.99356 to 0.99824	
		3	1.00099	0.99988 to 1.00209		1.00129	0.99985 to 1.00273		0.99915	0.99738 to 1.00091	
		4	1.00227	1.00077 to 1.00377		1.00048	0.99858 to 1.00238		1.00308	1.00084 to 1.00532	
		5	1.00228	1.00090 to 1.00366		1.00067	0.99892 to 1.00242		1.00294	1.00083 to 1.00504	
		6	0.99973	0.99737 to 1.00208		1.00313	1.00010 to 1.00616		0.99398	0.99045 to 0.99752	

^sStatistical significance if p-value<0.05

[#] Chi²-test of heterogeneity

Table A21. Estimates of the parallel effects of PM10 and of NO₂ loads on the event day (Lag = 0 days) and 6 previous days on emergency hospital admissions due to cardiovascular causes (calculated using polynomial distributed lag models). The effects are given as % change in the number of cases (with 95%-confidence intervals) for a 10 µg/m³ increase in the pollutant level of the respective day for different age groups

Cause	Age group	Lag (days)	PM10 load (one pollutant model)			PM10 load (two pollutant model, PM10 and NO ₂)			NO ₂ load (two pollutant model, PM10 and NO ₂)		
			Relative risk	95% CI (Rel. risk)	Heterogeneity test p-value ^{s#}	Relative risk	95% CI (Rel. risk)	Heterogeneity test p-value ^{s#}	Relative risk	95% CI (Rel. risk)	Heterogeneity test p-value ^{s#}
Cardio-vascular	All age groups	0	1.00554	1.00236 to 1.00872	0.8547	0.99982	0.99598 to 1.00365	0.5069	1.01270	1.00820 to 1.01722	0.6739
		1	1.00050	0.99877 to 1.00223		1.00303	1.00087 to 1.00518		0.99506	0.99249 to 0.99763	
		2	0.99902	0.99709 to 1.00095		1.00258	1.00021 to 1.00495		0.99259	0.98986 to 0.99531	
		3	0.99953	0.99823 to 1.00082		1.00028	0.99860 to 1.00196		0.99820	0.99614 to 1.00025	
		4	1.00046	0.99870 to 1.00221		0.99792	0.99570 to 1.00015		1.00501	1.00238 to 1.00762	
		5	1.00027	0.99865 to 1.00188		0.99730	0.99525 to 0.99934		1.00601	1.00355 to 1.00847	
		6	0.99739	0.99464 to 1.00014		1.00019	0.99665 to 1.00372		0.99426	0.99013 to 0.99840	
	15 to 64	0	1.00561	0.99960 to 1.01164	0.8989	0.99901	0.99178 to 1.00628	0.6409	1.01378	1.00534 to 1.02228	0.8430
		1	1.00202	0.99875 to 1.00530		1.00582	1.00173 to 1.00993		0.99264	0.98784 to 0.99745	
		2	0.99989	0.99624 to 1.00355		1.00512	1.00062 to 1.00964		0.98989	0.98479 to 0.99500	
		3	0.99883	0.99638 to 1.00128		1.00062	0.99744 to 1.00380		0.99691	0.99305 to 1.00078	
		4	0.99845	0.99512 to 1.00177		0.99605	0.99184 to 1.00025		1.00540	1.00048 to 1.01034	
		5	0.99837	0.99531 to 1.00143		0.99508	0.99121 to 0.99895		1.00685	1.00224 to 1.01148	
		6	0.99822	0.99301 to 1.00344		1.00141	0.99472 to 1.00813		0.99282	0.98509 to 1.00060	
	≥ 65	0	1.00580	1.00202 to 1.00957	0.8230	1.00044	0.99589 to 1.00501	0.7061	1.01209	1.00674 to 1.01746	0.6017
		1	0.99979	0.99774 to 1.00183		1.00190	0.99933 to 1.00446		0.99584	0.99279 to 0.99889	
		2	0.99854	0.99625 to 1.00082		1.00153	0.99871 to 1.00435		0.99346	0.99022 to 0.99670	
		3	0.99982	0.99828 to 1.00135		1.00025	0.99824 to 1.00224		0.99848	0.99603 to 1.00093	
		4	1.00146	0.99937 to 1.00354		0.99894	0.99629 to 1.00158		1.00461	1.00149 to 1.00773	
		5	1.00125	0.99933 to 1.00317		0.99850	0.99606 to 1.00093		1.00545	1.00253 to 1.00838	
		6	0.99701	0.99375 to 1.00028		0.99982	0.99562 to 1.00402		0.99465	0.98974 to 0.99957	
	≥ 75	0	1.00515	1.00057 to 1.00974	0.7593	0.99959	0.99406 to 1.00515	0.9146	1.01179	1.00530 to 1.01830	0.5457
		1	1.00129	0.99880 to 1.00378		1.00292	0.99980 to 1.00604		0.99682	0.99312 to 1.00053	
		2	1.00005	0.99727 to 1.00283		1.00265	0.99921 to 1.00608		0.99448	0.99056 to 0.99842	
		3	1.00027	0.99840 to 1.00214		1.00053	0.99810 to 1.00296		0.99889	0.99593 to 1.00186	
		4	1.00080	0.99826 to 1.00334		0.99836	0.99514 to 1.00158		1.00433	1.00055 to 1.00811	
		5	1.00048	0.99815 to 1.00282		0.99789	0.99493 to 1.00086		1.00498	1.00143 to 1.00853	
		6	0.99817	0.99420 to 1.00215		1.00090	0.99579 to 1.00603		0.99507	0.98912 to 1.00105	

^sStatistical significance if p-value<0.05

[#] Chi²-test of heterogeneity

Table A22. Estimates of the parallel effects of PM10 and of NO₂ loads on the event day (Lag = 0 days) and 6 previous days on emergency hospital admissions due to respiratory causes (calculated using polynomial distributed lag models). The effects are given as % change in the number of cases (with 95%-confidence intervals) for a 10 µg/m³ increase in the pollutant level of the respective day for different age groups

Cause	Age group	Lag (days)	PM10 load (one pollutant model)			PM10 load (two pollutant model, PM10 and NO ₂)			NO ₂ load (two pollutant model, PM10 and NO ₂)		
			Relative risk	95% CI (Rel. risk)	Heterogeneity test p-value ^{s#}	Relative risk	95% CI (Rel. risk)	Heterogeneity test p-value ^{s#}	Relative risk	95% CI (Rel. risk)	Heterogeneity test p-value ^{s#}
Respiratory	All age groups	0	0.99795	0.99373 to 1.00217	0.1437	0.99570	0.98658 to 1.00491	0.0730	1.00649	0.99709 to 1.01597	0.0028
		1	0.99932	0.99701 to 1.00162		1.00111	0.99704 to 1.00519		0.99801	0.99110 to 1.00496	
		2	1.00048	0.99790 to 1.00304		1.00272	0.99939 to 1.00605		0.99697	0.99111 to 1.00285	
		3	1.00132	0.99961 to 1.00302		1.00190	0.99781 to 1.00600		1.00003	0.99355 to 1.00654	
		4	1.00174	0.99941 to 1.00407		1.00008	0.99397 to 1.00622		1.00391	0.99557 to 1.01230	
		5	1.00166	0.99951 to 1.00381		0.99865	0.99049 to 1.00688		1.00527	0.99749 to 1.01309	
		6	1.00097	0.99729 to 1.00465		0.99901	0.98622 to 1.01196		1.00078	0.99186 to 1.00976	
	15 to 64	0	1.00042	0.99301 to 1.00788	0.6826	0.99843	0.98937 to 1.00757	0.4889	1.00440	0.99392 to 1.01499	0.5729
		1	0.99979	0.99574 to 1.00383		0.99794	0.99286 to 1.00303		1.00397	0.99789 to 1.01007	
		2	1.00084	0.99632 to 1.00538		0.99975	0.99414 to 1.00537		1.00266	0.99621 to 1.00914	
		3	1.00244	0.99942 to 1.00545		1.00212	0.99815 to 1.00609		1.00135	0.99652 to 1.00619	
		4	1.00341	0.99929 to 1.00754		1.00330	0.99801 to 1.00860		1.00091	0.99479 to 1.00706	
		5	1.00261	0.99881 to 1.00641		1.00152	0.99667 to 1.00638		1.00220	0.99646 to 1.00797	
		6	0.99887	0.99242 to 1.00536		0.99506	0.98673 to 1.00345		1.00611	0.99629 to 1.01602	
	≥ 65	0	0.99719	0.99115 to 1.00325	0.6140	0.99294	0.98556 to 1.00036	0.2234	1.00655	0.99738 to 1.01578	0.0162
		1	1.00054	0.99722 to 1.00385		1.00389	0.99971 to 1.00808		0.99123	0.98393 to 0.99858	
		2	1.00191	0.99821 to 1.00561		1.00554	1.00095 to 1.01014		0.99207	0.98573 to 0.99844	
		3	1.00218	0.99972 to 1.00463		1.00233	0.99910 to 1.00557		1.00120	0.99577 to 1.00665	
		4	1.00223	0.99888 to 1.00558		0.99882	0.99452 to 1.00312		1.01089	1.00027 to 1.02161	
		5	1.00294	0.99985 to 1.00603		0.99949	0.99551 to 1.00347		1.01317	1.00073 to 1.02575	
		6	1.00520	0.99991 to 1.01050		1.00888	1.00198 to 1.01582		1.00009	0.97854 to 1.02211	
	≥ 75	0	1.00113	0.99378 to 1.00853	0.5470	0.99675	0.98777 to 1.00580	0.4258	1.00993	0.99298 to 1.02715	0.0508
		1	1.00061	0.99659 to 1.00464		1.00385	0.99878 to 1.00894		0.99253	0.98621 to 0.99887	
		2	1.00079	0.99630 to 1.00529		1.00463	0.99905 to 1.01022		0.99127	0.98364 to 0.99894	
		3	1.00153	0.99855 to 1.00452		1.00231	0.99838 to 1.00625		0.99869	0.99320 to 1.00419	
		4	1.00269	0.99861 to 1.00677		1.00016	0.99493 to 1.00541		1.00753	0.99827 to 1.01686	
		5	1.00411	1.00035 to 1.00788		1.00143	0.99659 to 1.00629		1.01034	0.99766 to 1.02318	
		6	1.00566	0.99923 to 1.01211		1.00940	1.00101 to 1.01785		0.99968	0.97605 to 1.02387	

^s Statistical significance if p-value<0.05

[#] Chi²-test of heterogeneity

1.2 Figures

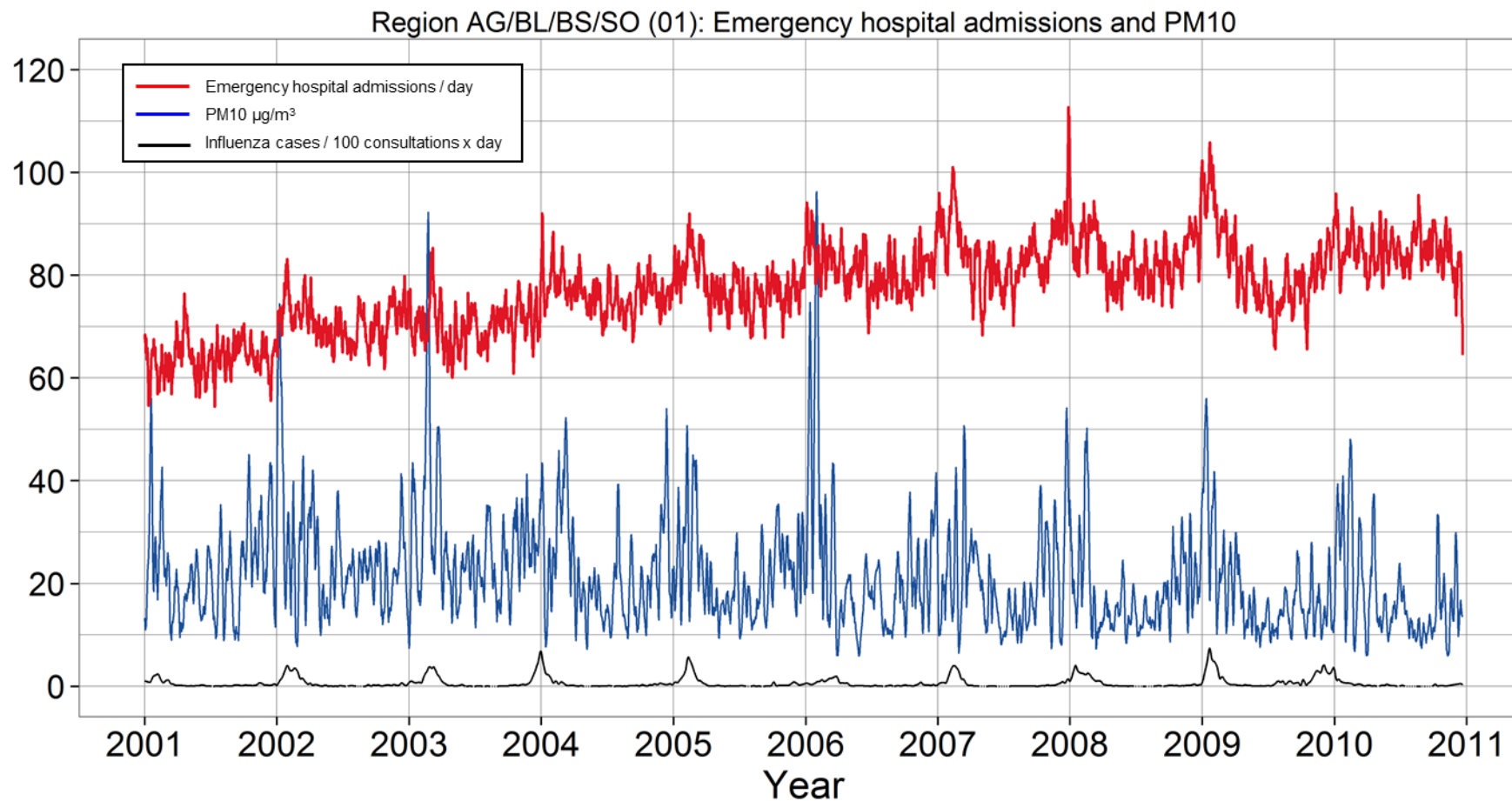


Figure A1. Region AG/BS/BL/SO (01): Time course of the daily counts of emergency hospital admissions due to medical causes, of the PM10 daily mean concentration and of the influenza daily number of cases per 100 doctor consultations for the period 2001 to 2010. A seven day moving average was used to smooth the lines for better visualization.

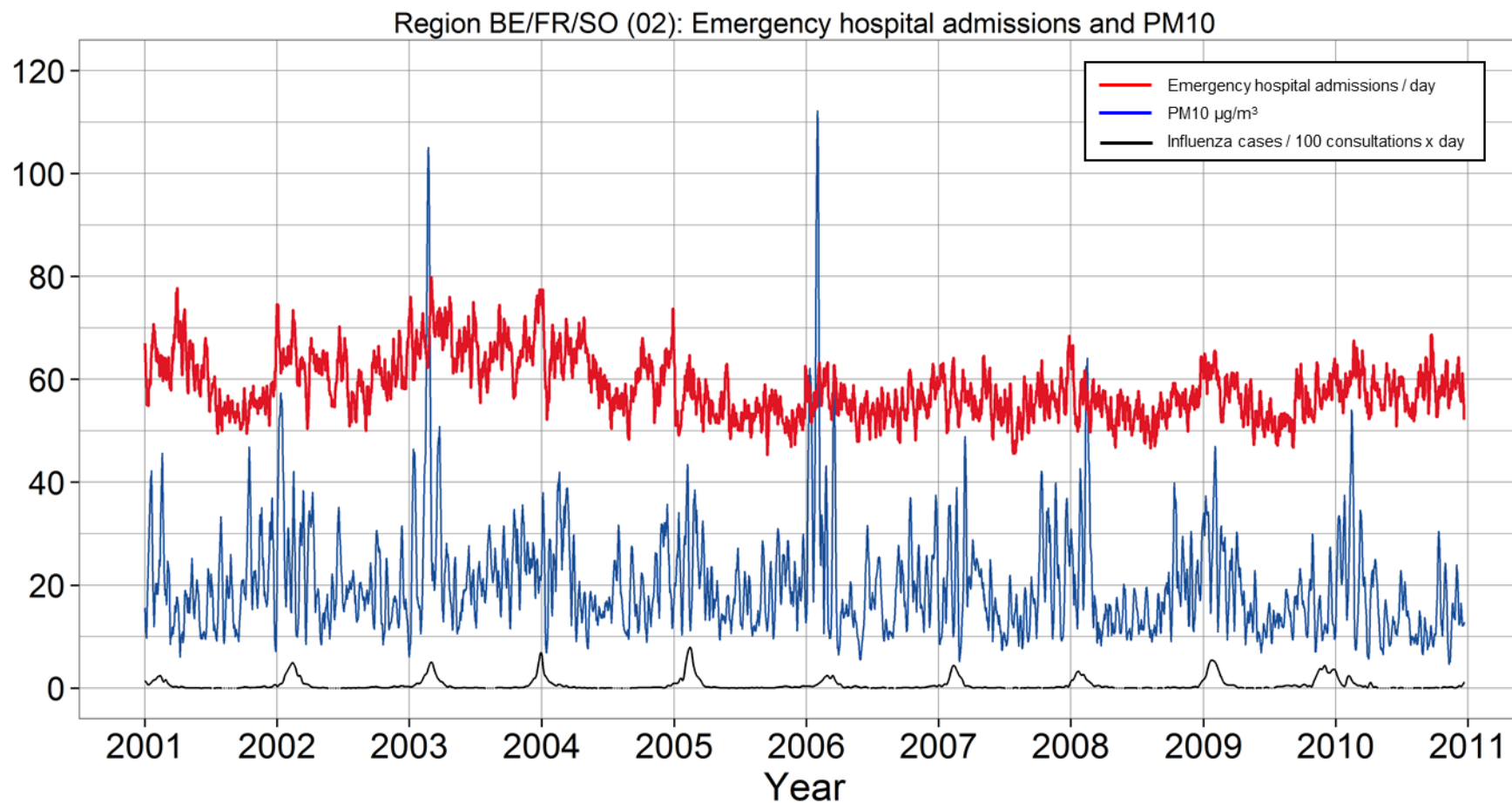


Figure A2: Region BE/FR/SO (02): Time course of the daily counts of emergency hospital admissions due to medical causes, of the PM10 daily mean concentration and of the influenza daily number of cases per 100 doctor consultations for the period 2001 to 2010. A seven day moving average was used to smooth the lines for better visualization.

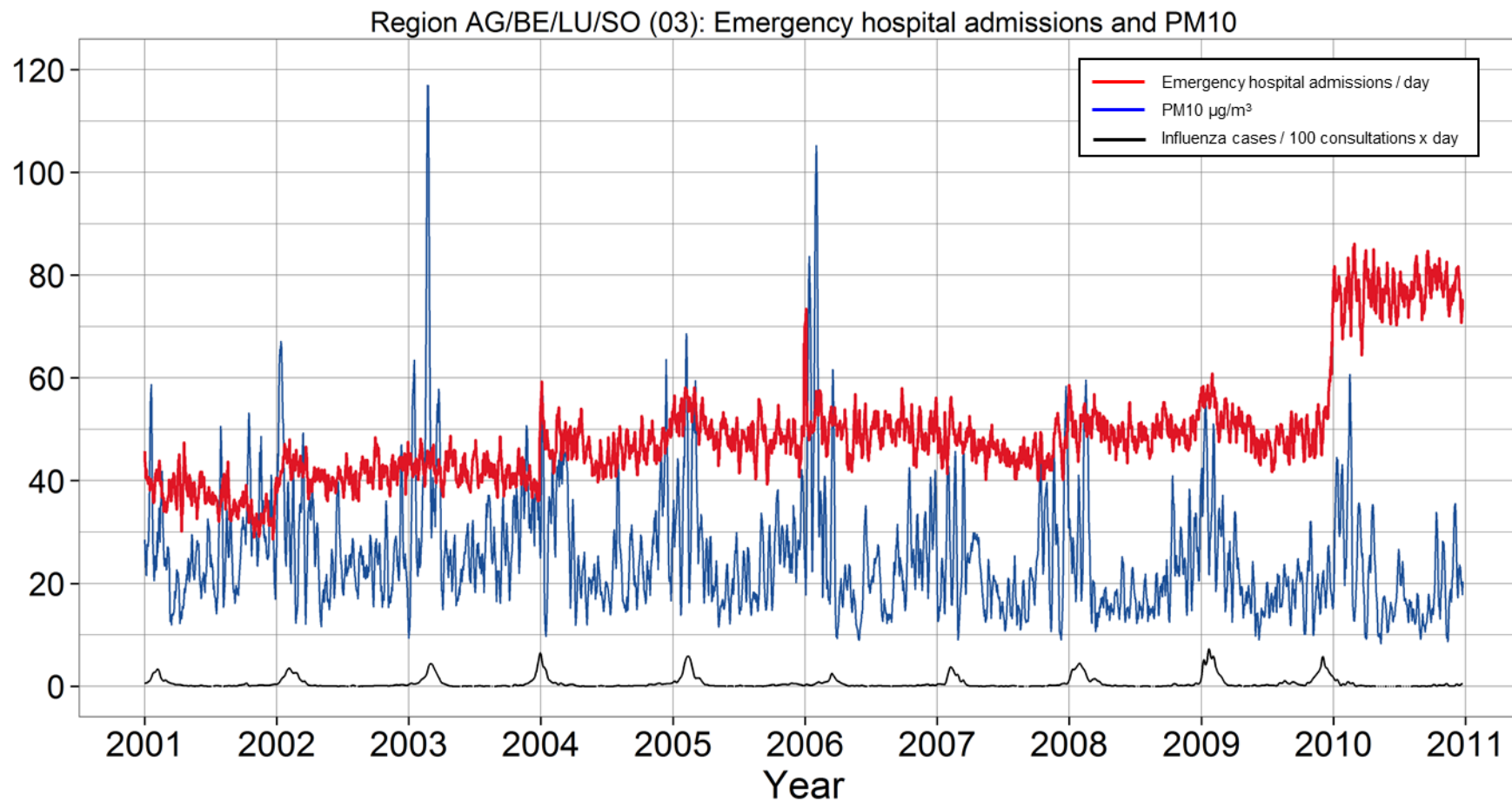


Figure A3. Region AG/BE/LU/SO (03): Time course of the daily counts of emergency hospital admissions due to medical causes, of the PM10 daily mean concentration and of the influenza daily number of cases per 100 doctor consultations for the period 2001 to 2010. A seven day moving average was used to smooth the lines for better visualization.

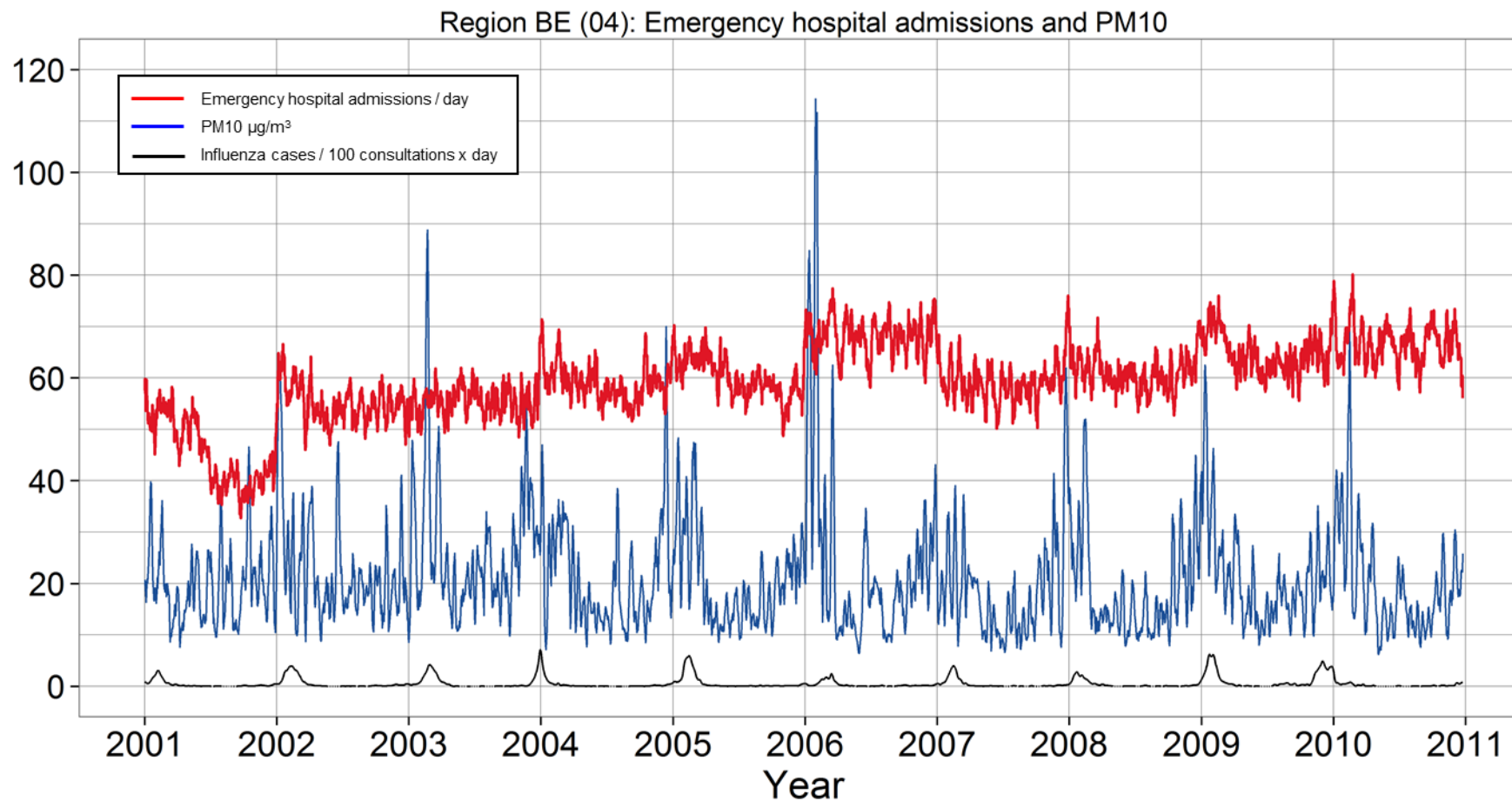


Figure A4. Region BE (04): Time course of the daily counts of emergency hospital admissions due to medical causes, of the PM10 daily mean concentration and of the influenza daily number of cases per 100 doctor consultations for the period 2001 to 2010. A seven day moving average was used to smooth the lines for better visualization.

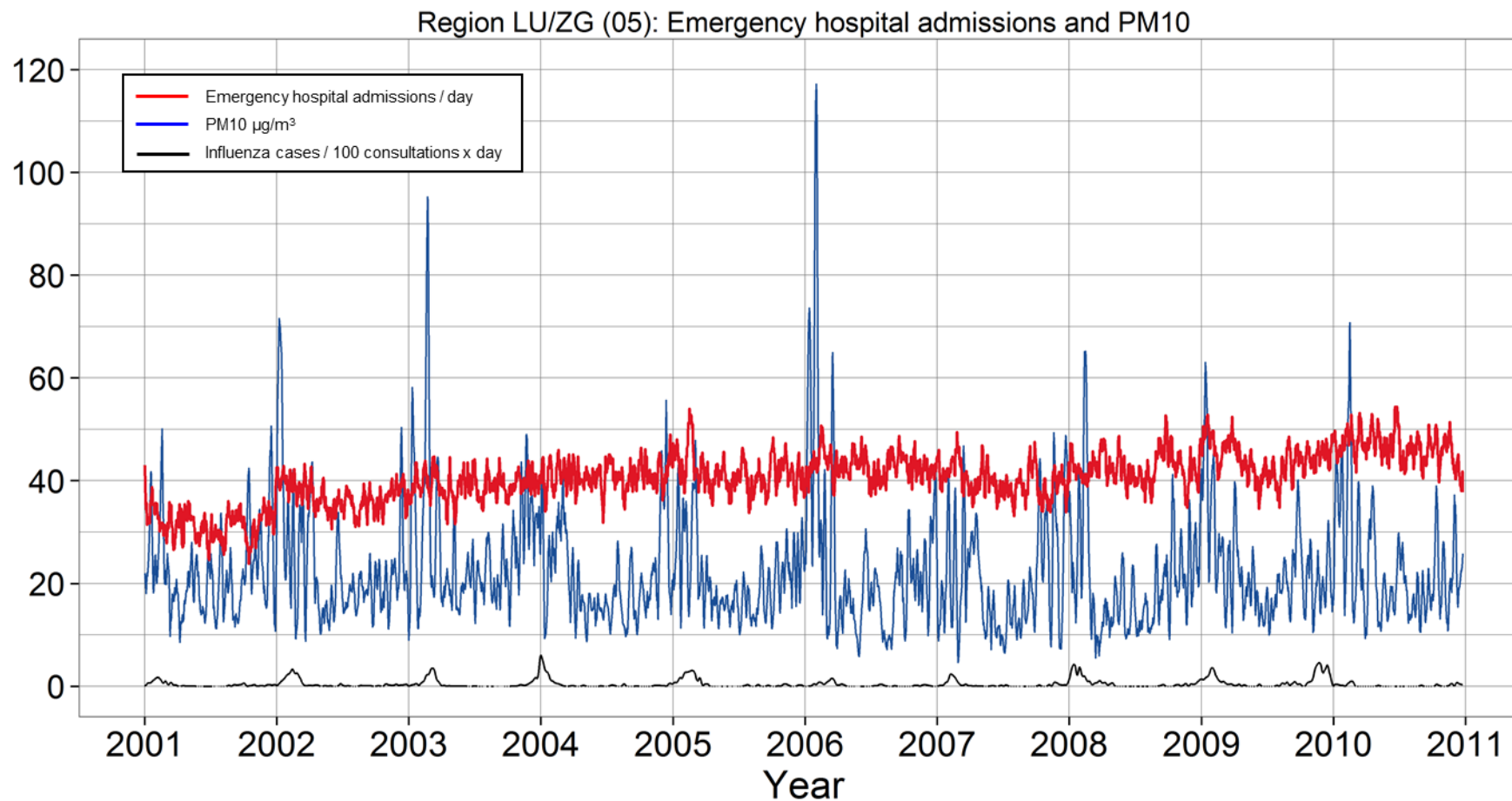


Figure A5. Region LU/ZG (05): Time course of the daily counts of emergency hospital admissions due to medical causes, of the PM10 daily mean concentration and of the influenza daily number of cases per 100 doctor consultations for the period 2001 to 2010. A seven day moving average was used to smooth the lines for better visualization.

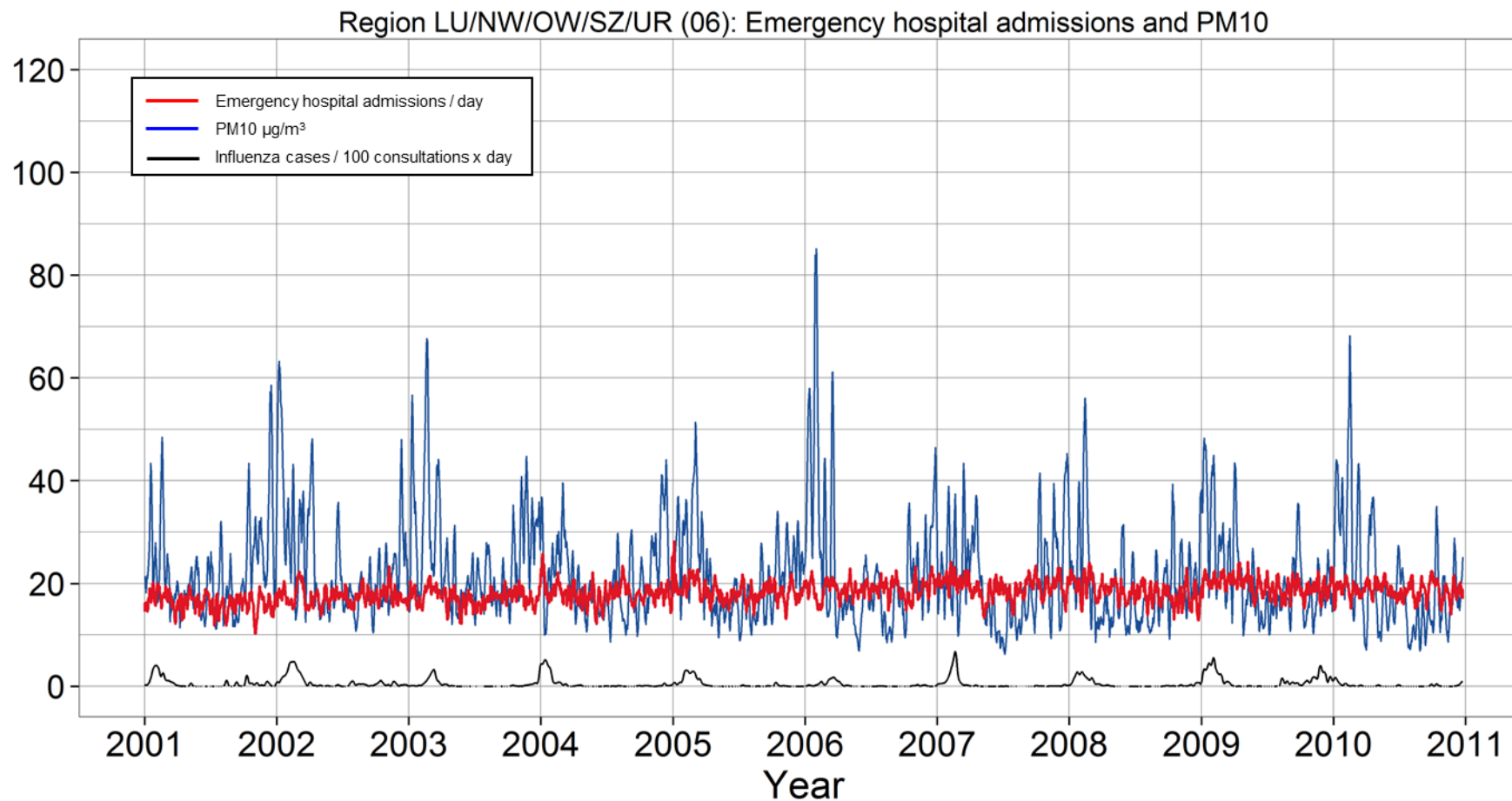


Figure A6. Region LU/NW/OW/SZ/UR (06): Time course of the daily counts of emergency hospital admissions due to medical causes, of the PM₁₀ daily mean concentration and of the influenza daily number of cases per 100 doctor consultations for the period 2001 to 2010. A seven day moving average was used to smooth the lines for better visualization.

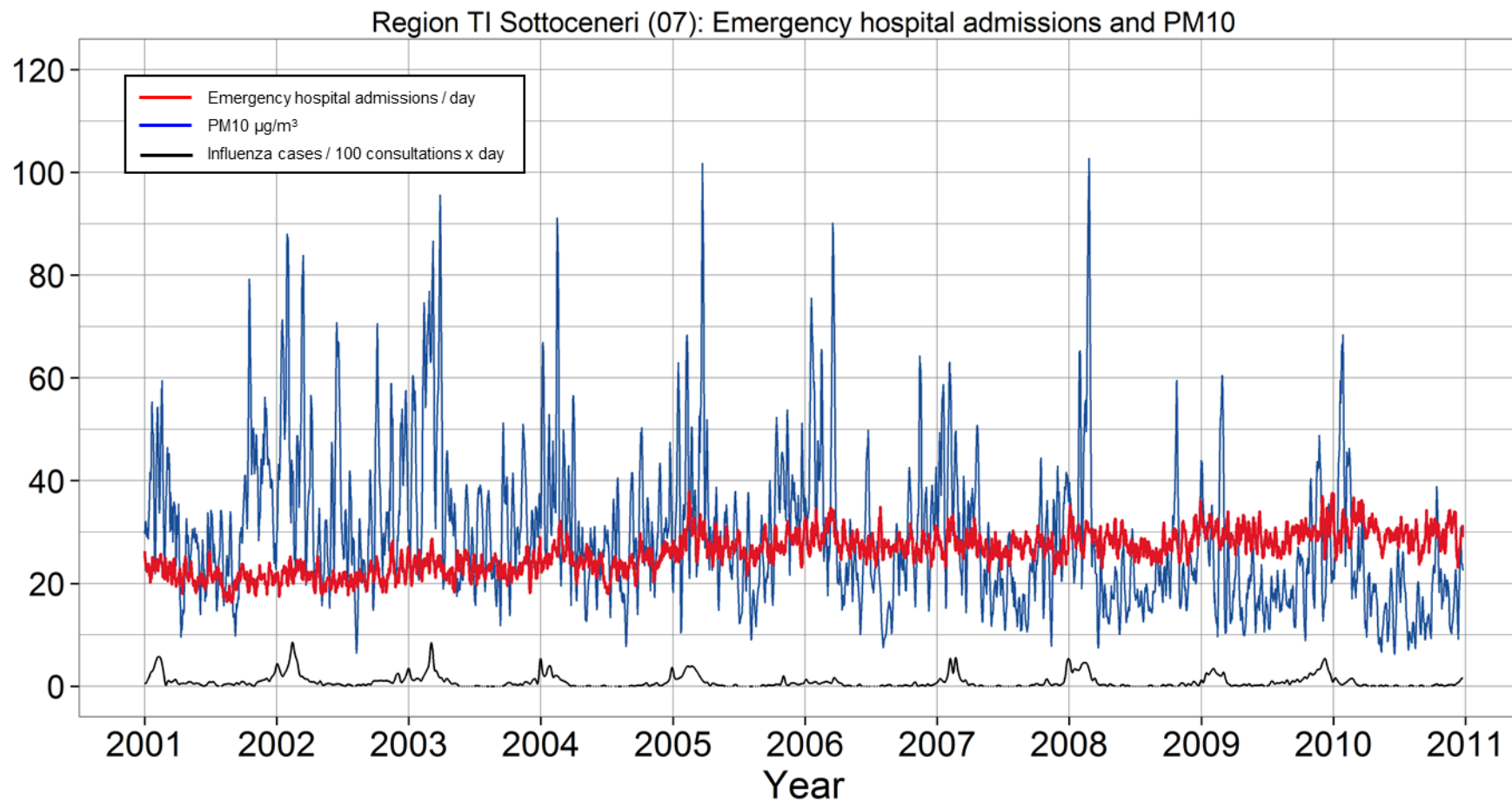


Figure A7. Region Ti Sottoceneri (07): Time course of the daily counts of emergency hospital admissions due to medical causes, of the PM10 daily mean concentration and of the influenza daily number of cases per 100 doctor consultations for the period 2001 to 2010. A seven day moving average was used to smooth the lines for better visualization.

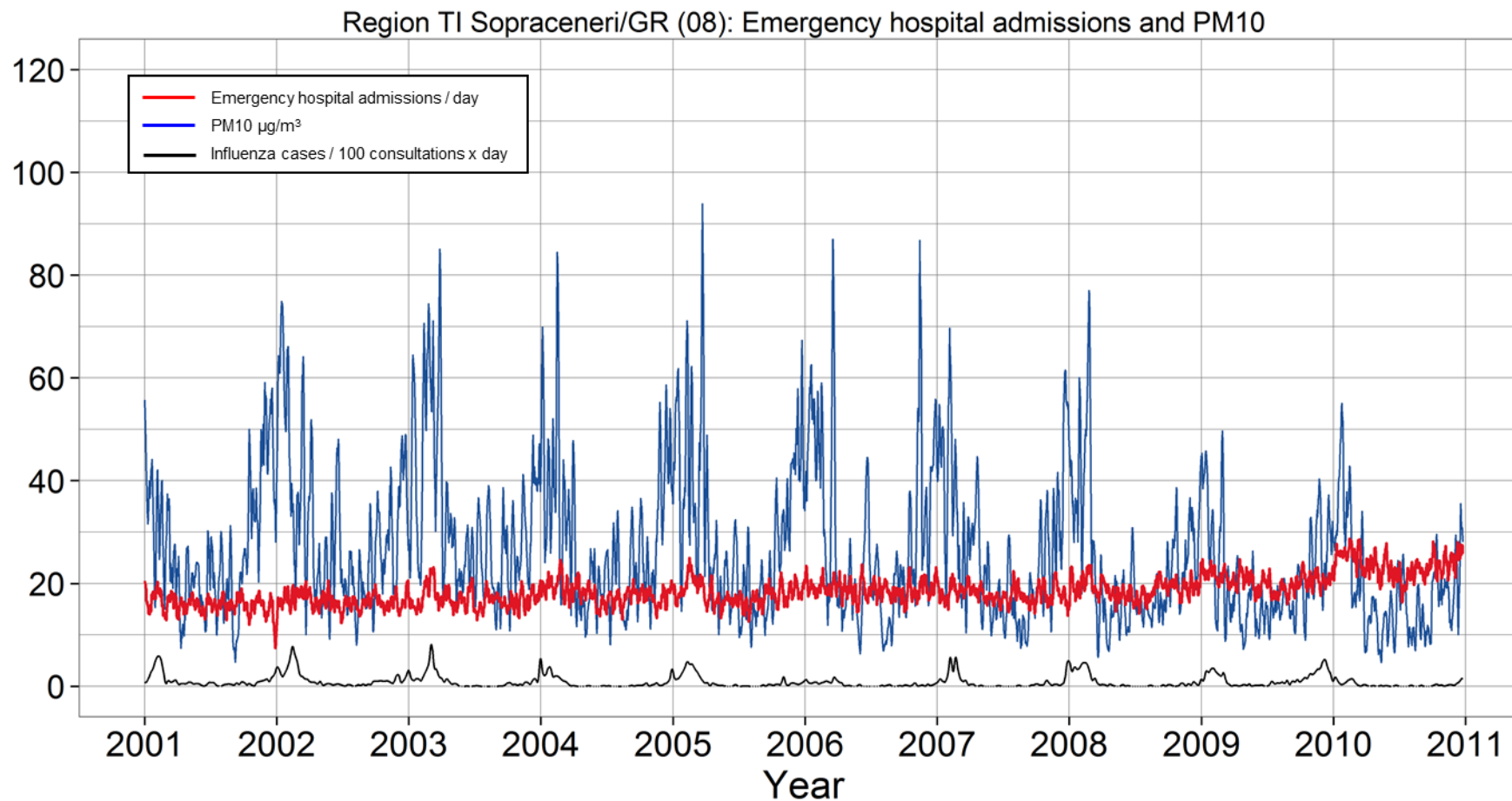


Figure A8. Region TI Sopraceneri/GR: Time course of the daily counts of emergency hospital admissions due to medical causes, of the PM10 daily mean concentration and of the influenza daily number of cases per 100 doctor consultations for the period 2001 to 2010. A seven day moving average was used to smooth the lines for better visualization.

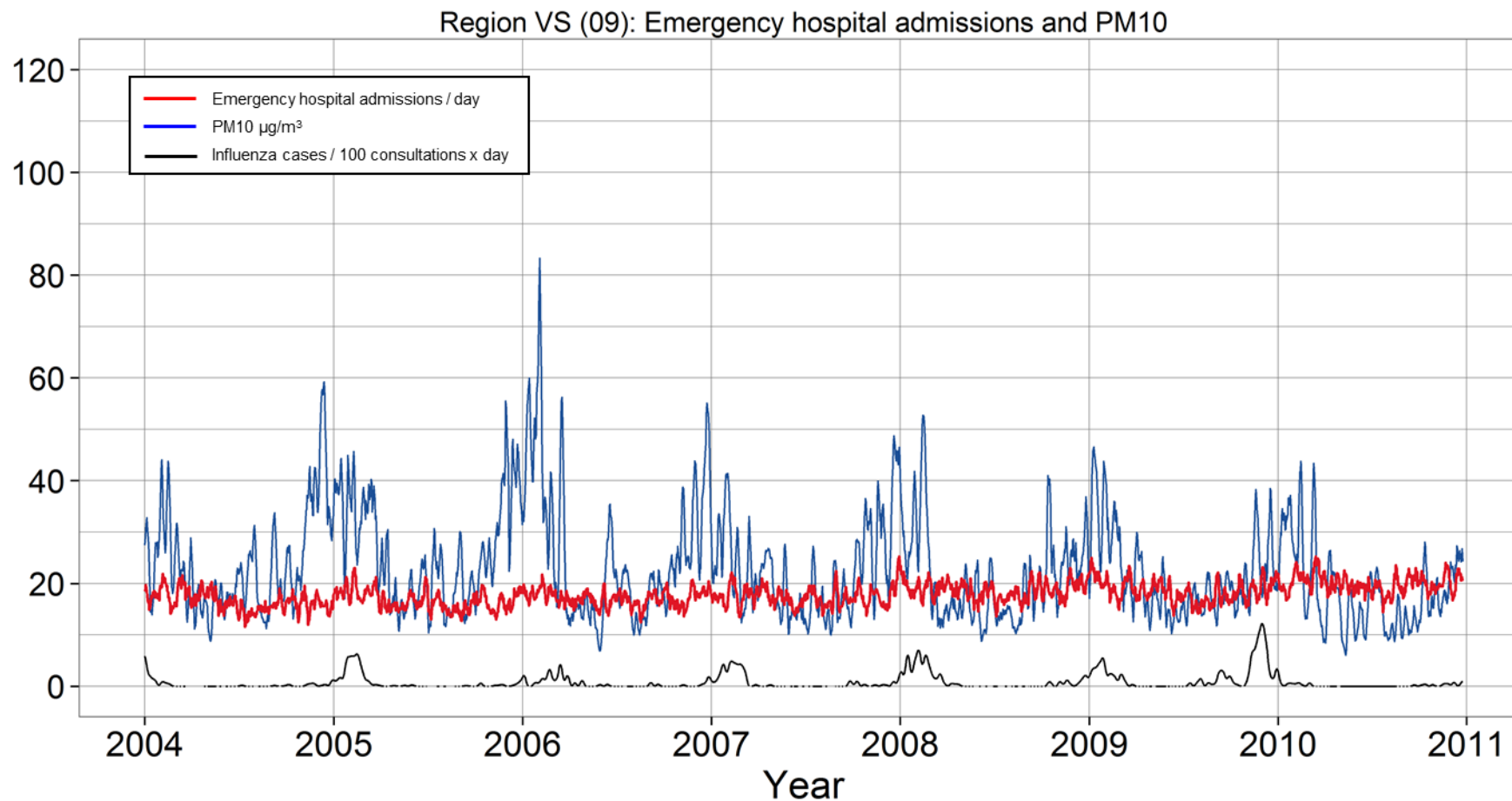


Figure A9. Region VS (09): Time course of the daily counts of emergency hospital admissions due to medical causes, of the PM10 daily mean concentration and of the influenza daily number of cases per 100 doctor consultations for the period 2001 to 2010. A seven day moving average was used to smooth the lines for better visualization.

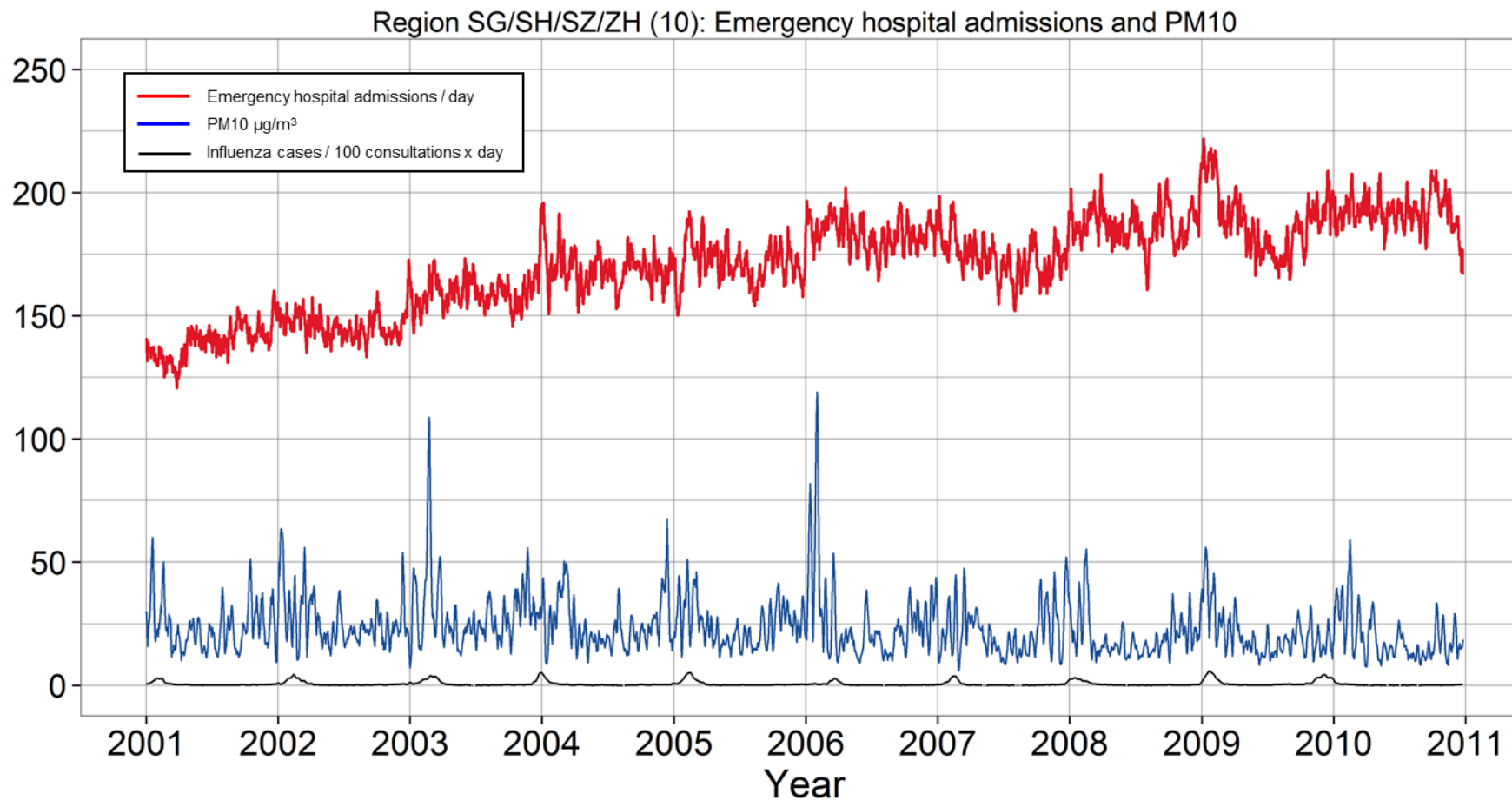


Figure A10. Region SG/SH/SZ/ZH (10): Time course of the daily counts of emergency hospital admissions due to medical causes, of the PM10 daily mean concentration and of the influenza daily number of cases per 100 doctor consultations for the period 2001 to 2010. A seven day moving average was used to smooth the lines for better visualization.

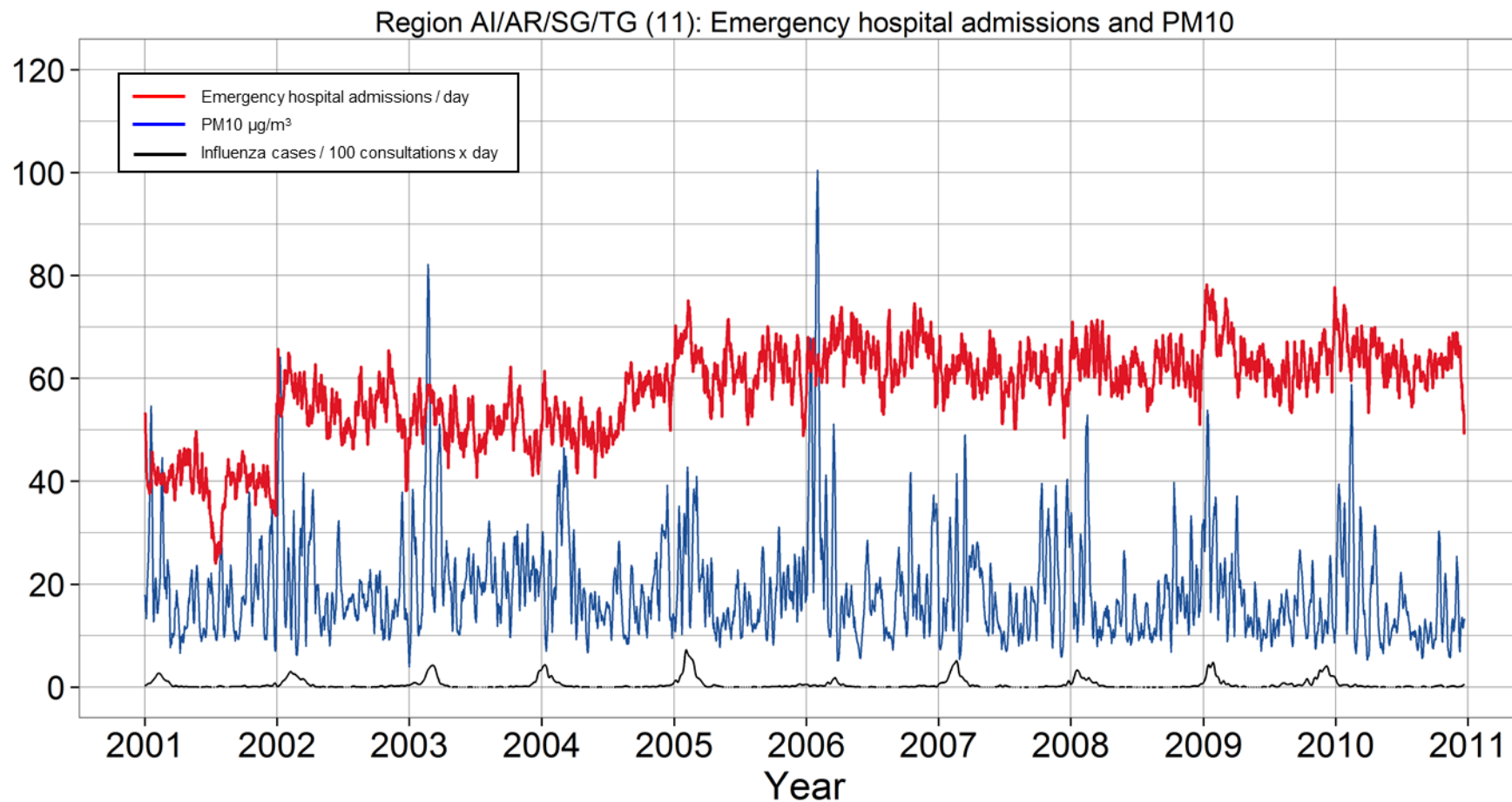


Figure A11. Region AI/AR/SG/TG (11): Time course of the daily counts of emergency hospital admissions due to medical causes, of the PM10 daily mean concentration and of the influenza daily number of cases per 100 doctor consultations for the period 2001 to 2010. A seven day moving average was used to smooth the lines for better visualization.

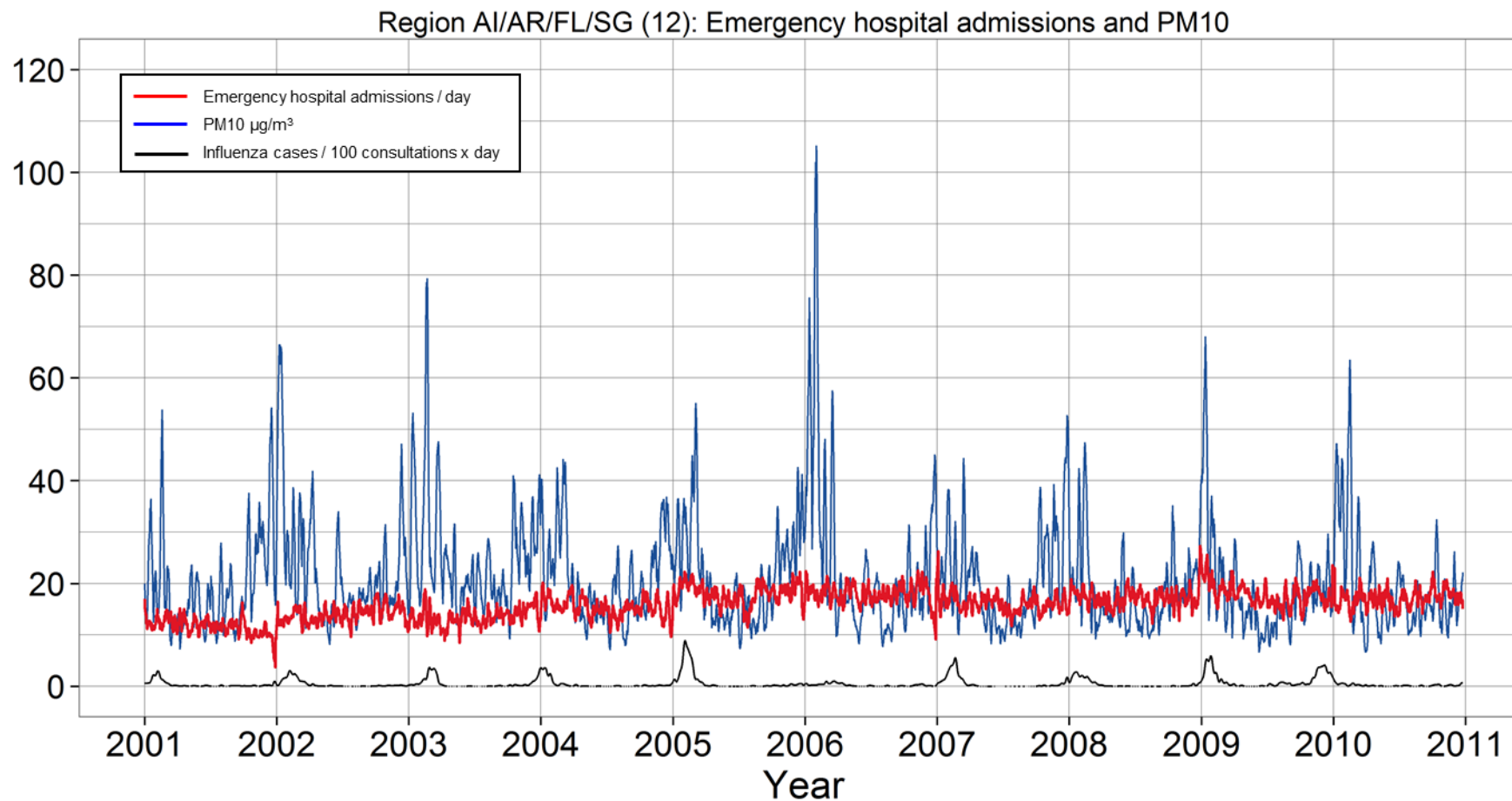


Figure A12. Region AI/AR/FL/SG (12): Time course of the daily counts of emergency hospital admissions due to medical causes, of the PM10 daily mean concentration and of the influenza daily number of cases per 100 doctor consultations for the period 2001 to 2010. A seven day moving average was used to smooth the lines for better visualization.

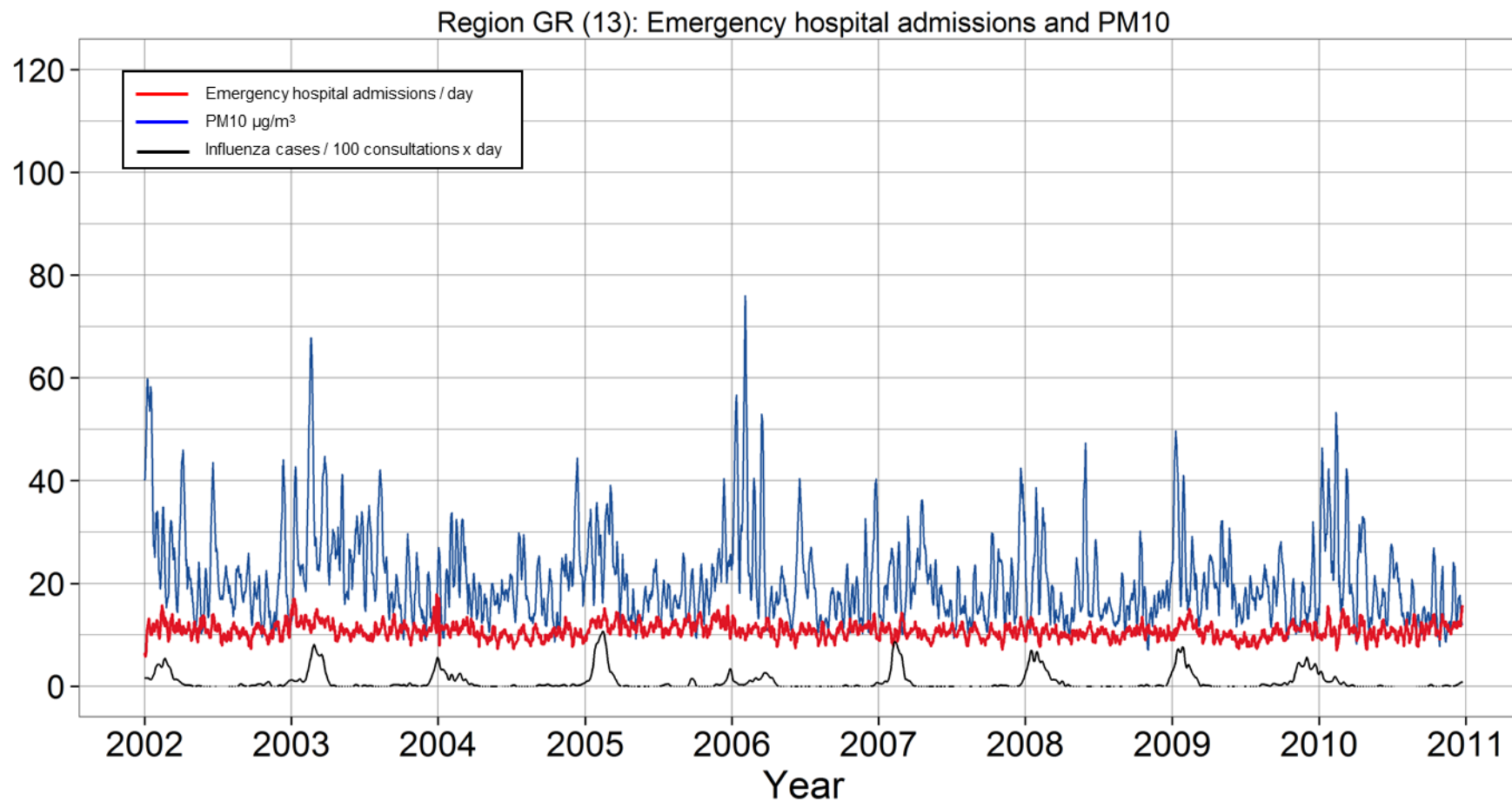


Figure A13. Region GR (13): Time course of the daily counts of emergency hospital admissions due to medical causes, of the PM10 daily mean concentration and of the influenza daily number of cases per 100 doctor consultations for the period 2001 to 2010. A seven day moving average was used to smooth the lines for better visualization.

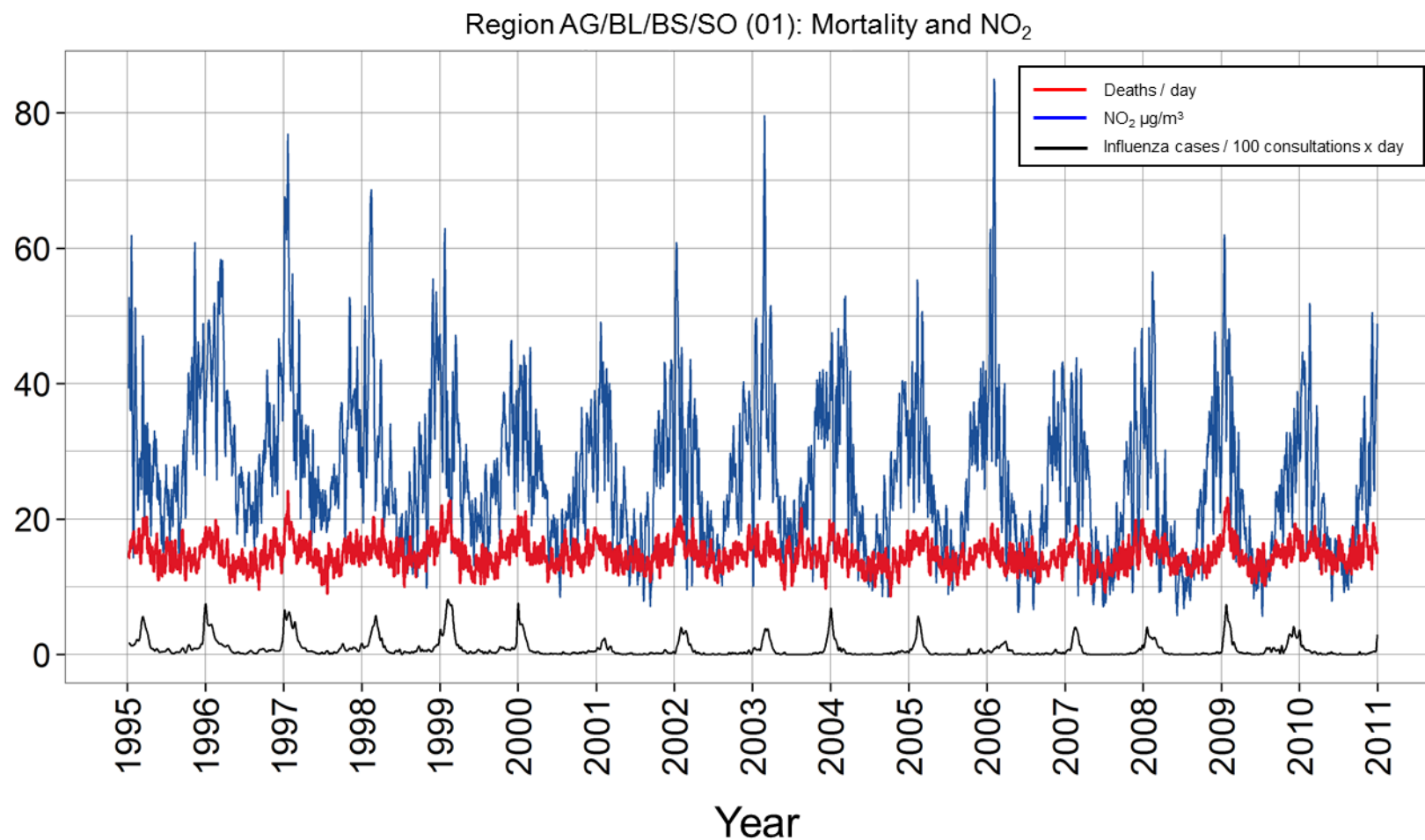


Figure A14. Region AG/BS/BL/SO (01): Time course of the daily numbers of deaths due to medical causes, of the NO₂ daily mean concentration and of the influenza daily number of cases per 100 doctor consultations for the period 1995 to 2010. A seven day moving average was used to smooth the lines for better visualization.

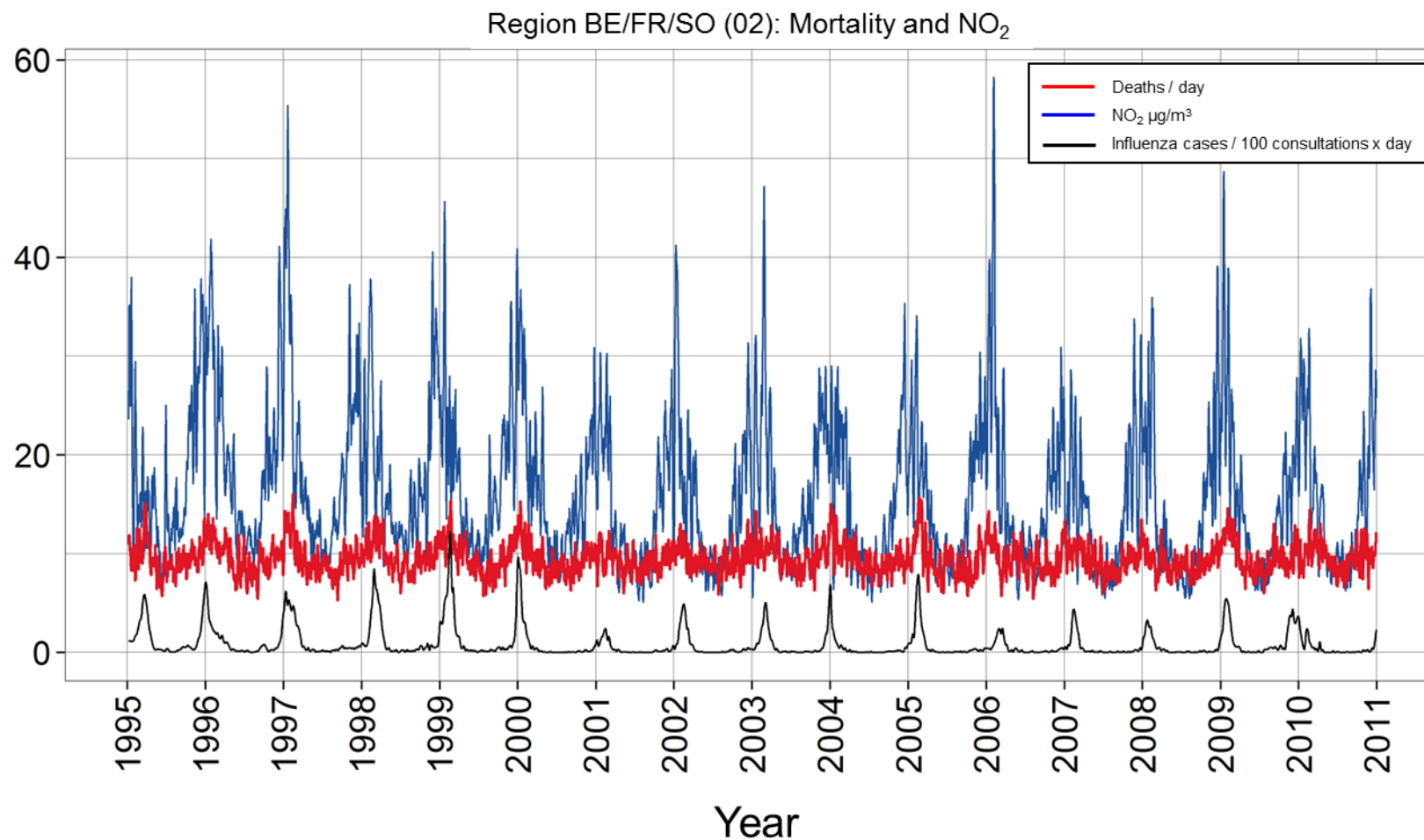


Figure A15. Region BE/FR/SO (02): Time course of the daily numbers of deaths due to medical causes, of the NO₂ daily mean concentration and of the influenza daily number of cases per 100 doctor consultations for the period 1995 to 2010. A seven day moving average was used to smooth the lines for better visualization.

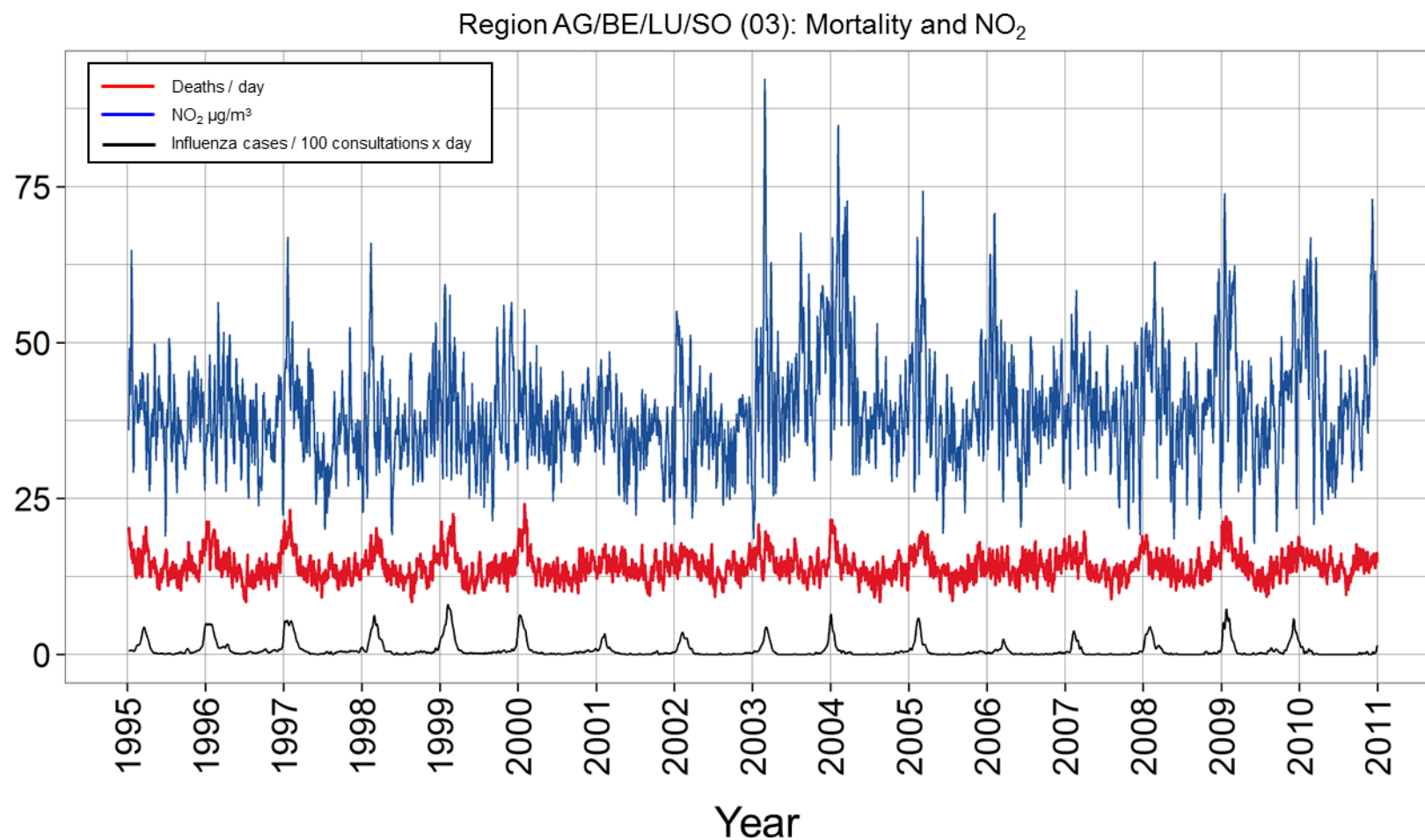


Figure A16. Region AG/BE/LU/SO (03): Time course of the daily numbers of deaths due to medical causes, of the NO₂ daily mean concentration and of the influenza daily number of cases per 100 doctor consultations for the period 1995 to 2010. A seven day moving average was used to smooth the lines for better visualization.

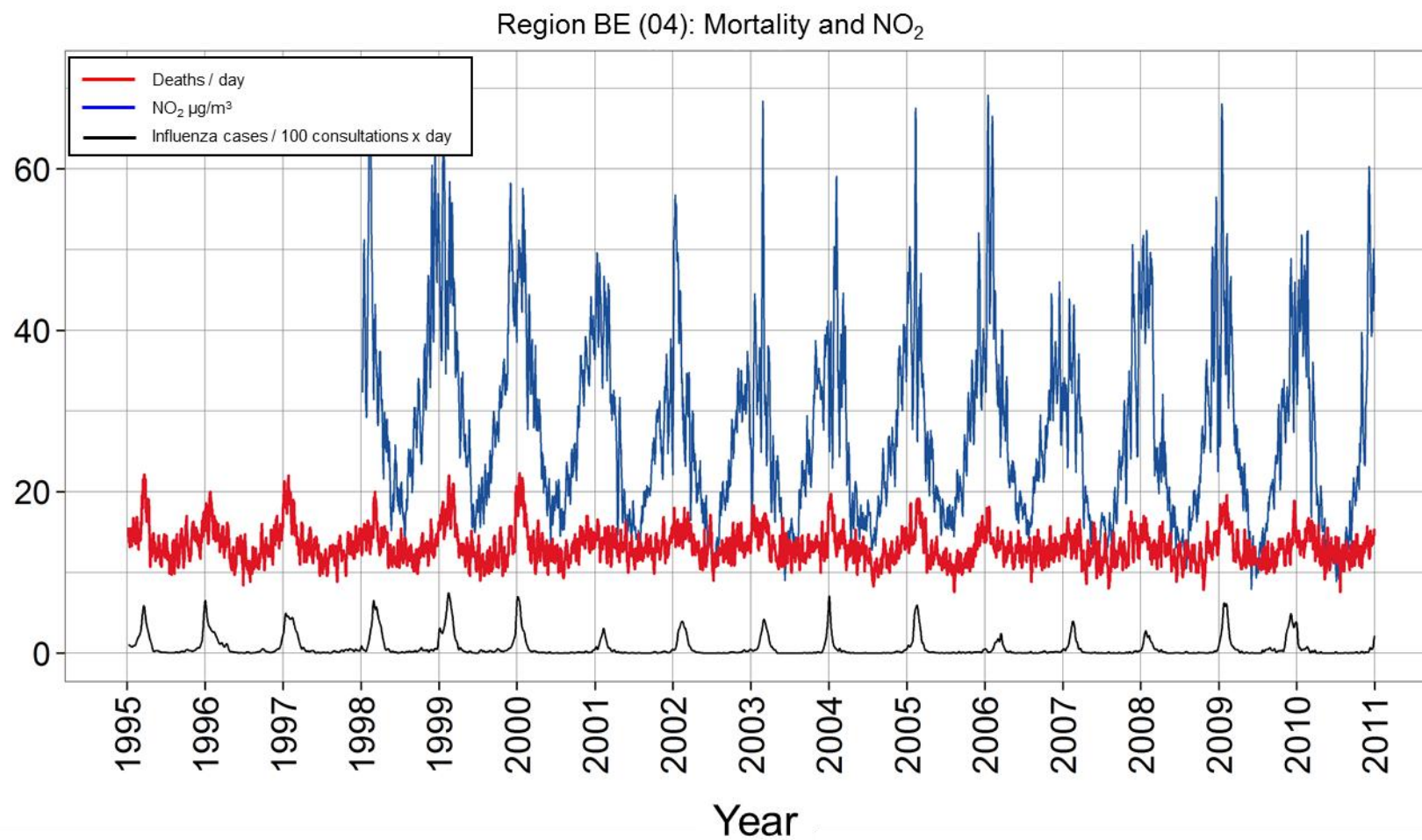


Figure A16. Region BE (04): Time course of the daily numbers of deaths due to medical causes, of the NO₂ daily mean concentration and of the influenza daily number of cases per 100 doctor consultations for the period 1995 to 2010. A seven day moving average was used to smooth the lines for better visualization.

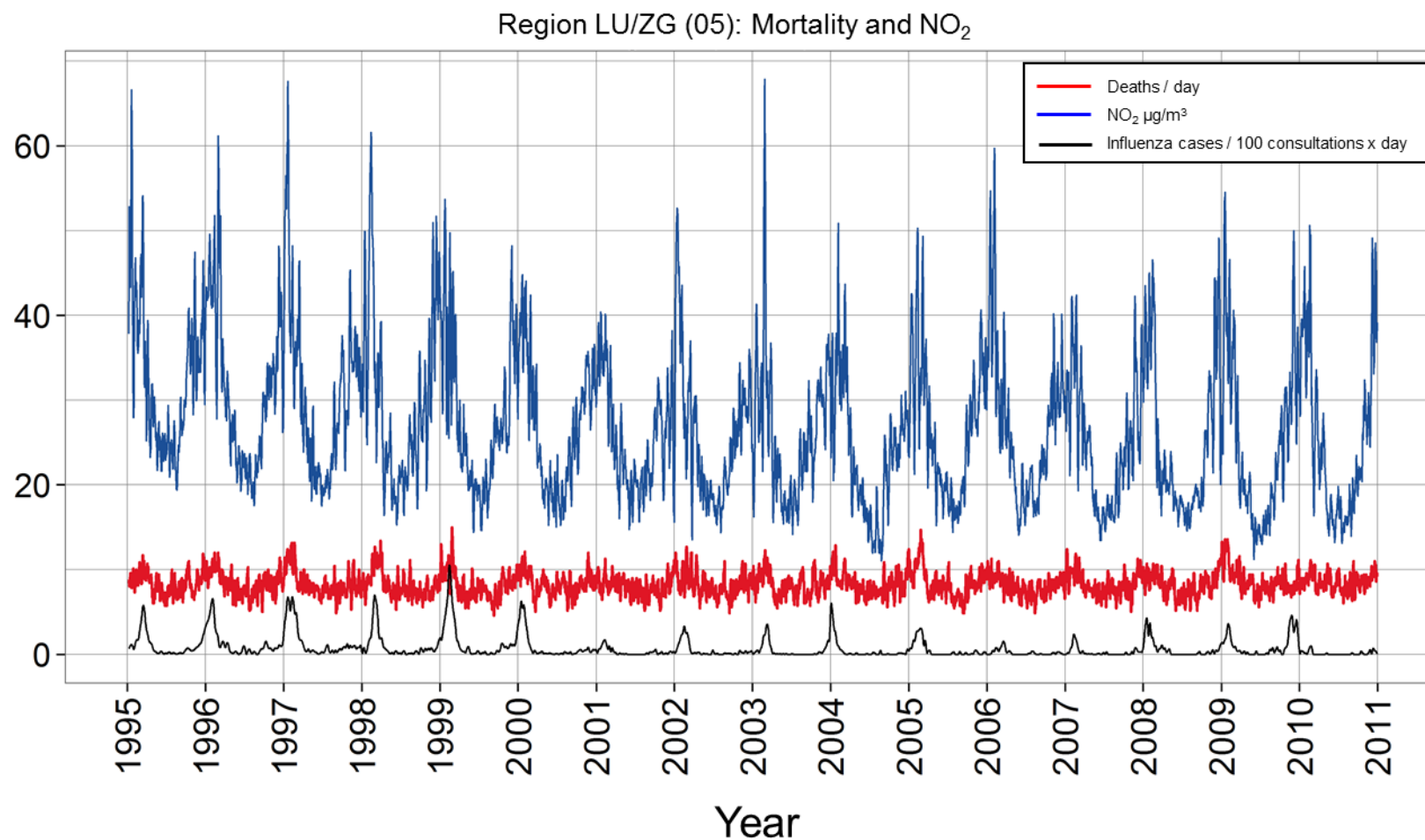


Figure A18. Region LU/ZG (05): Time course of the daily numbers of deaths due to medical causes, of the NO₂ daily mean concentration and of the influenza daily number of cases per 100 doctor consultations for the period 1995 to 2010. A seven day moving average was used to smooth the lines for better visualization.

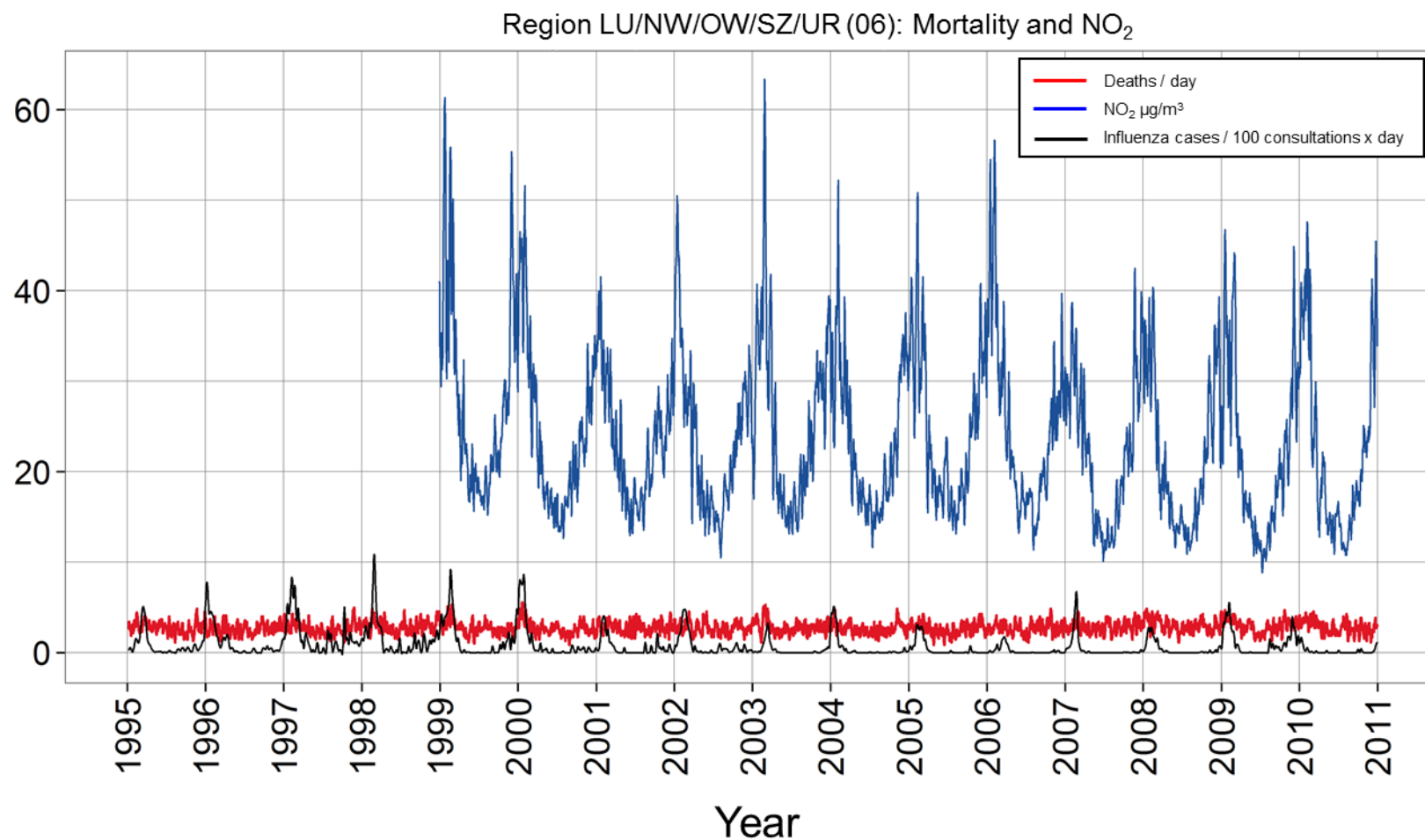


Figure A19. Region LU/NW/OW/SZ/UR (06): Time course of the daily numbers of deaths due to medical causes, of the NO₂ daily mean concentration and of the influenza daily number of cases per 100 doctor consultations for the period 1995 to 2010. A seven day moving average was used to smooth the lines for better visualization.

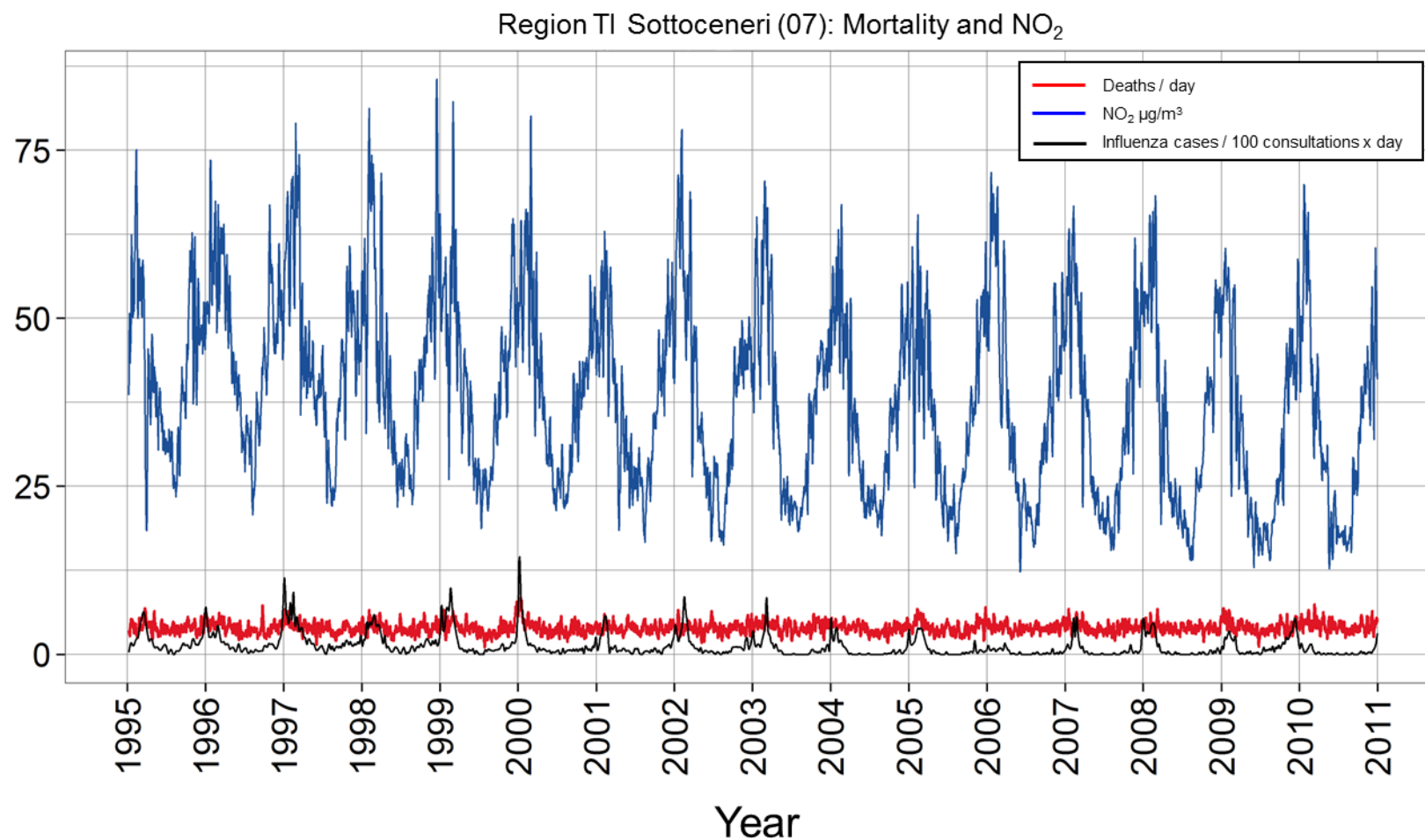


Figure A20. Region TI Sottoceneri (07): Time course of the daily numbers of deaths due to medical causes, of the NO₂ daily mean concentration and of the influenza daily number of cases per 100 doctor consultations for the period 1995 to 2010. A seven day moving average was used to smooth the lines for better visualization.

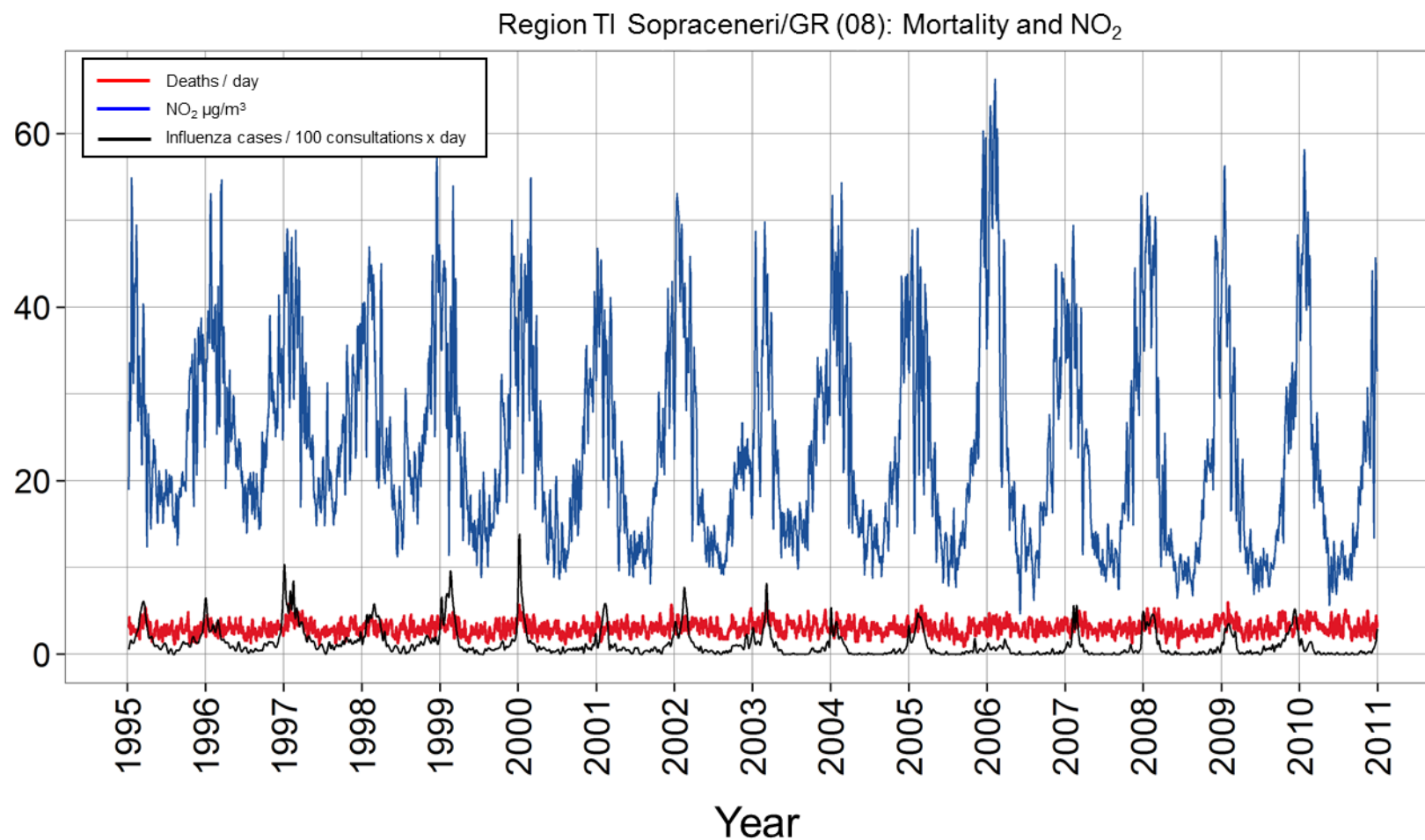


Figure A21. Region TI Sopraceneri/GR (08): Time course of the daily numbers of deaths due to medical causes, of the NO₂ daily mean concentration and of the influenza daily number of cases per 100 doctor consultations for the period 1995 to 2010. A seven day moving average was used to smooth the lines for better visualization.

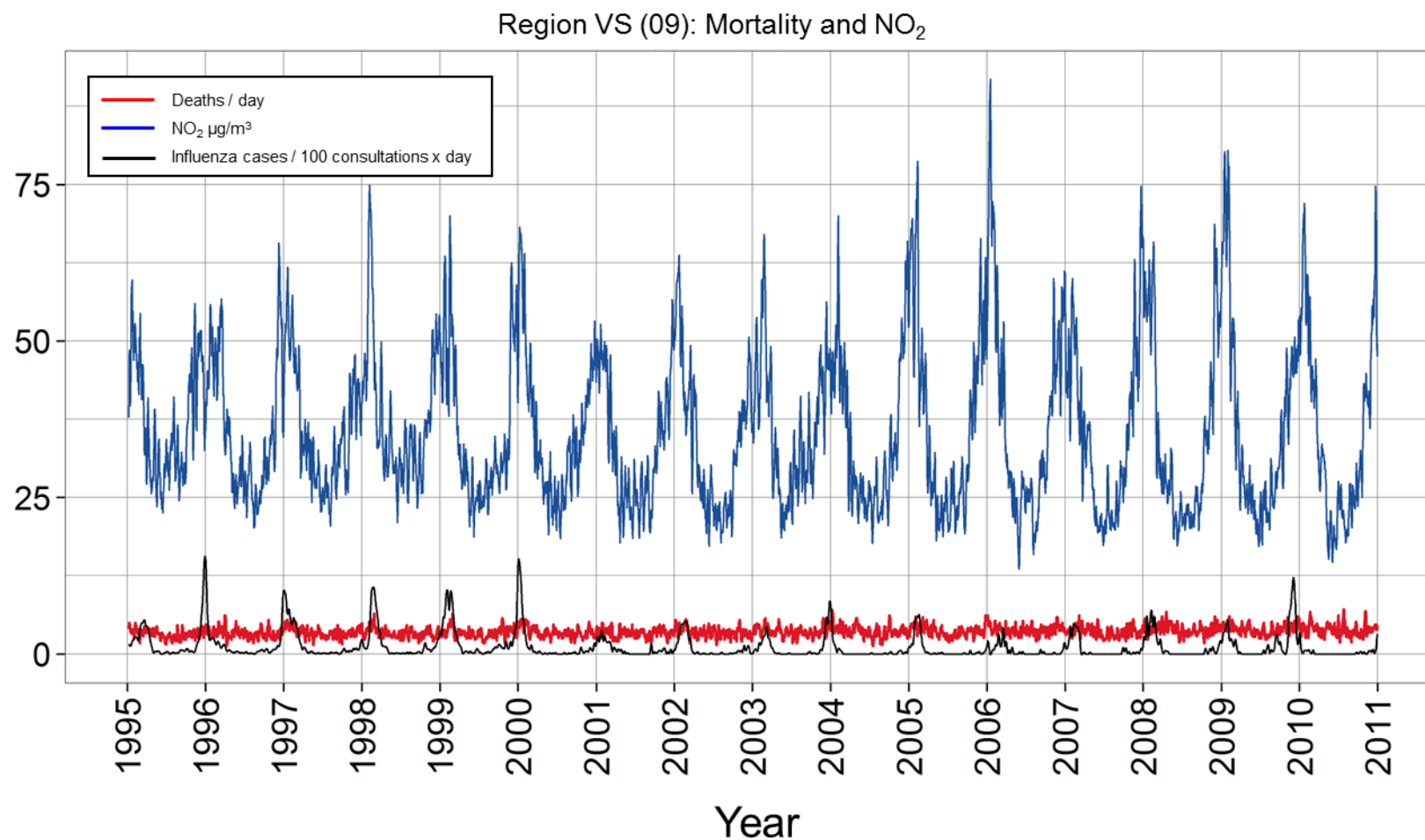


Figure A22. Region VS.(09): Time course of the daily numbers of deaths due to medical causes, of the NO₂ daily mean concentration and of the influenza daily number of cases per 100 doctor consultations for the period 1995 to 2010. A seven day moving average was used to smooth the lines for better visualization.

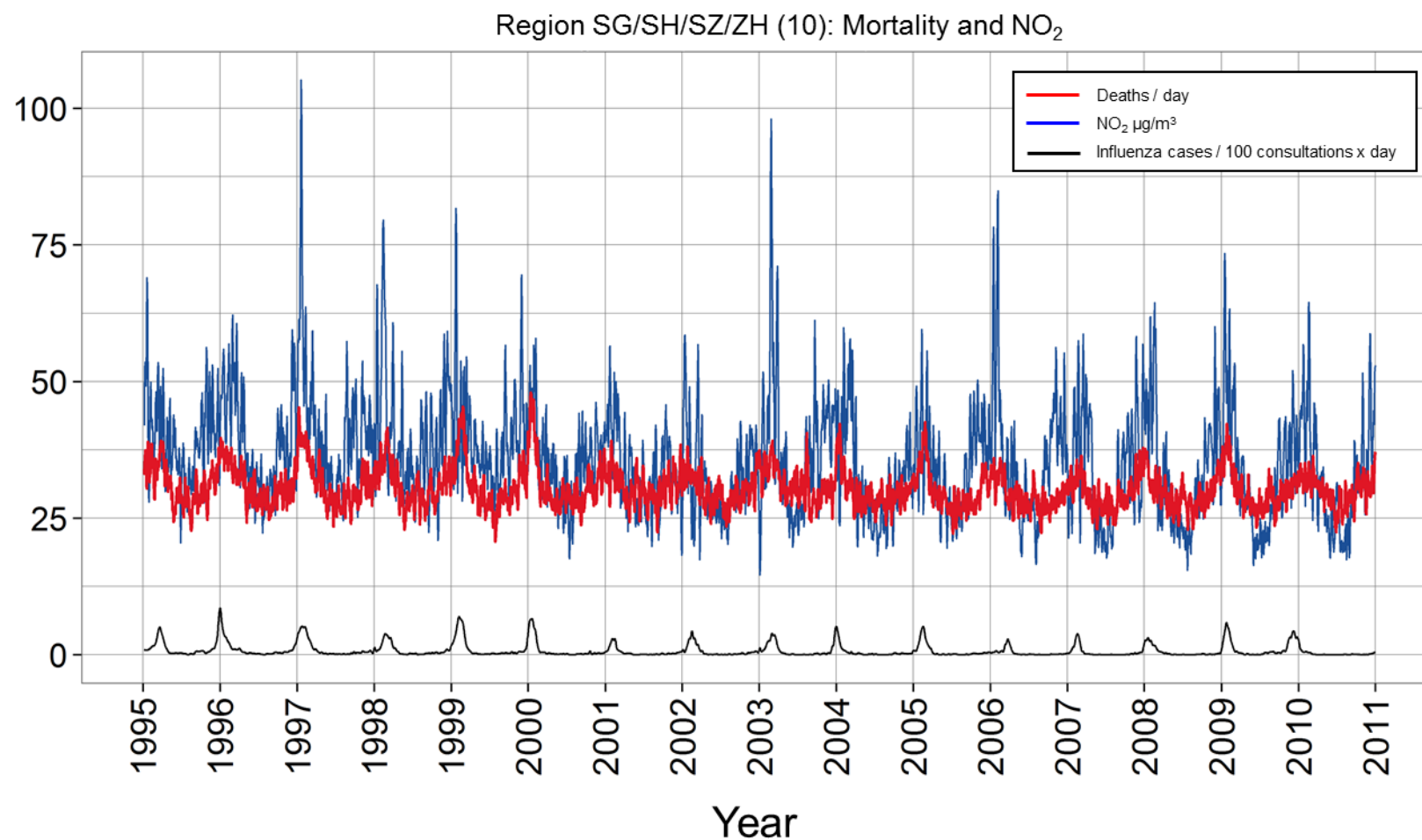


Figure A23. Region SG/SH/SZ/ZH (10): Time course of the daily numbers of deaths due to medical causes, of the NO₂ daily mean concentration and of the influenza daily number of cases per 100 doctor consultations for the period 1995 to 2010. A seven day moving average was used to smooth the lines for better visualization.

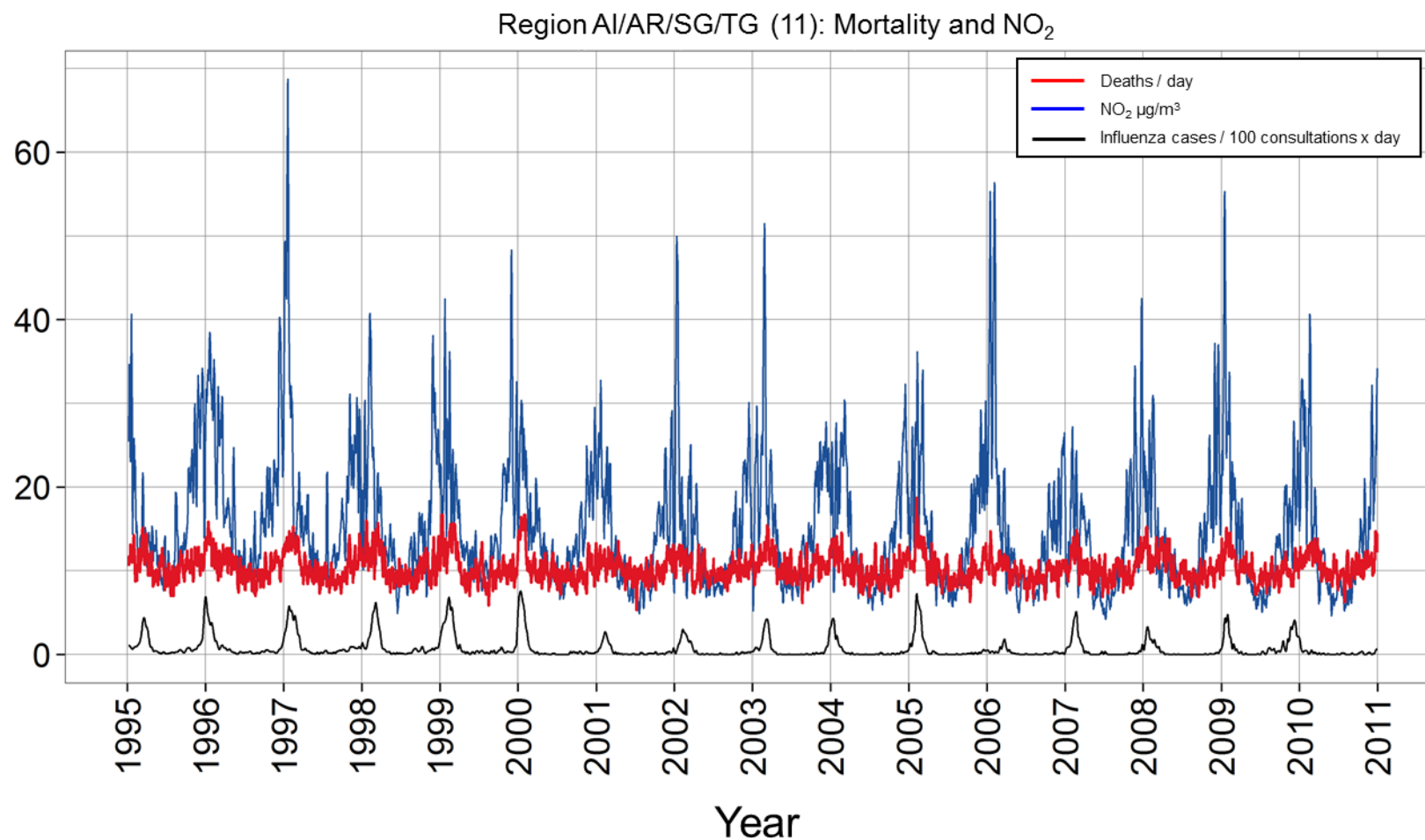


Figure A24. Region AI/AR/SG/TG (11): Time course of the daily numbers of deaths due to medical causes, of the NO₂ daily mean concentration and of the influenza daily number of cases per 100 doctor consultations for the period 1995 to 2010. A seven day moving average was used to smooth the lines for better visualization.

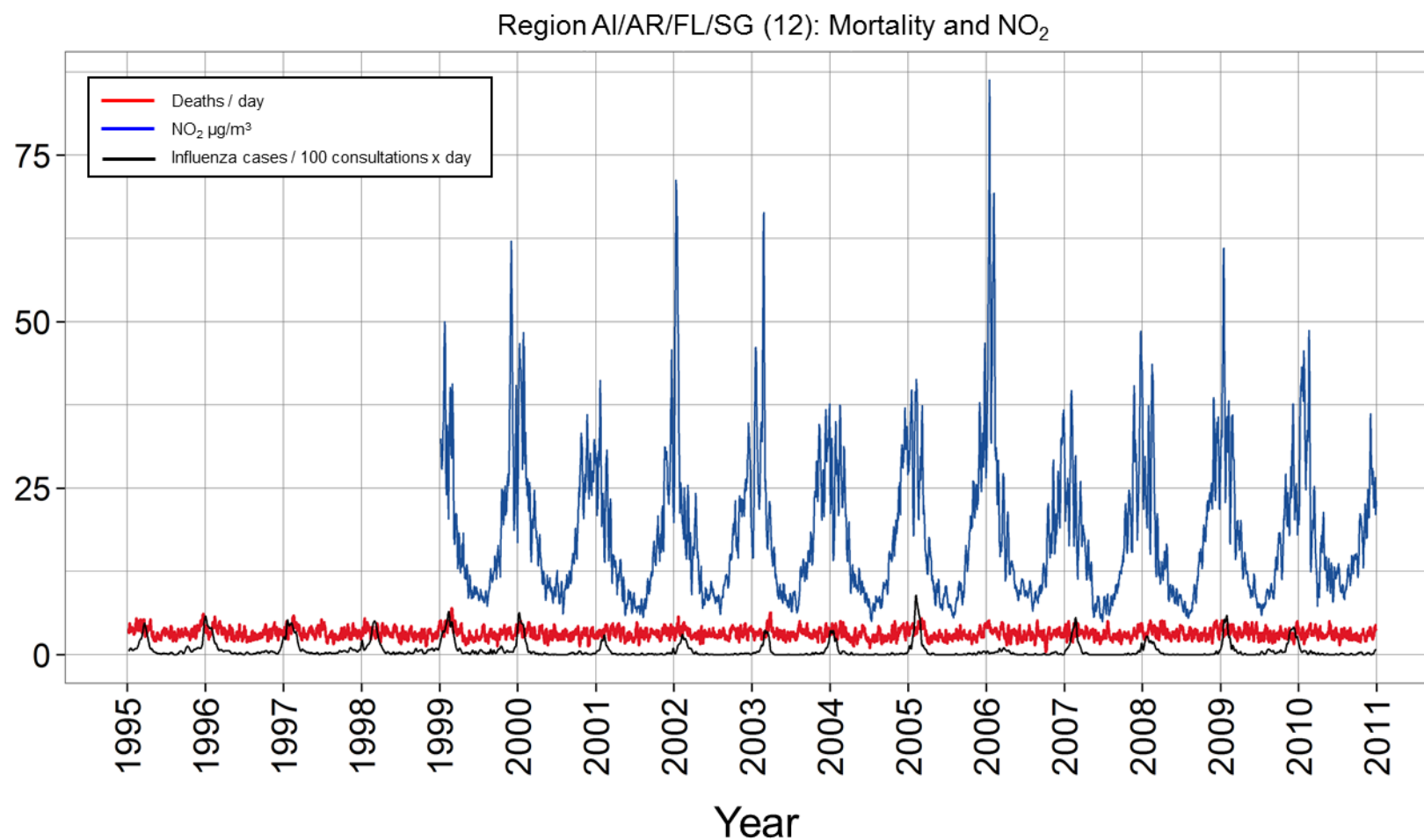


Figure A25. Region AI/AR/FL/SG (12): Time course of the daily numbers of deaths due to medical causes, of the NO₂ daily mean concentration and of the influenza daily number of cases per 100 doctor consultations for the period 1995 to 2010. A seven day moving average was used to smooth the lines for better visualization.

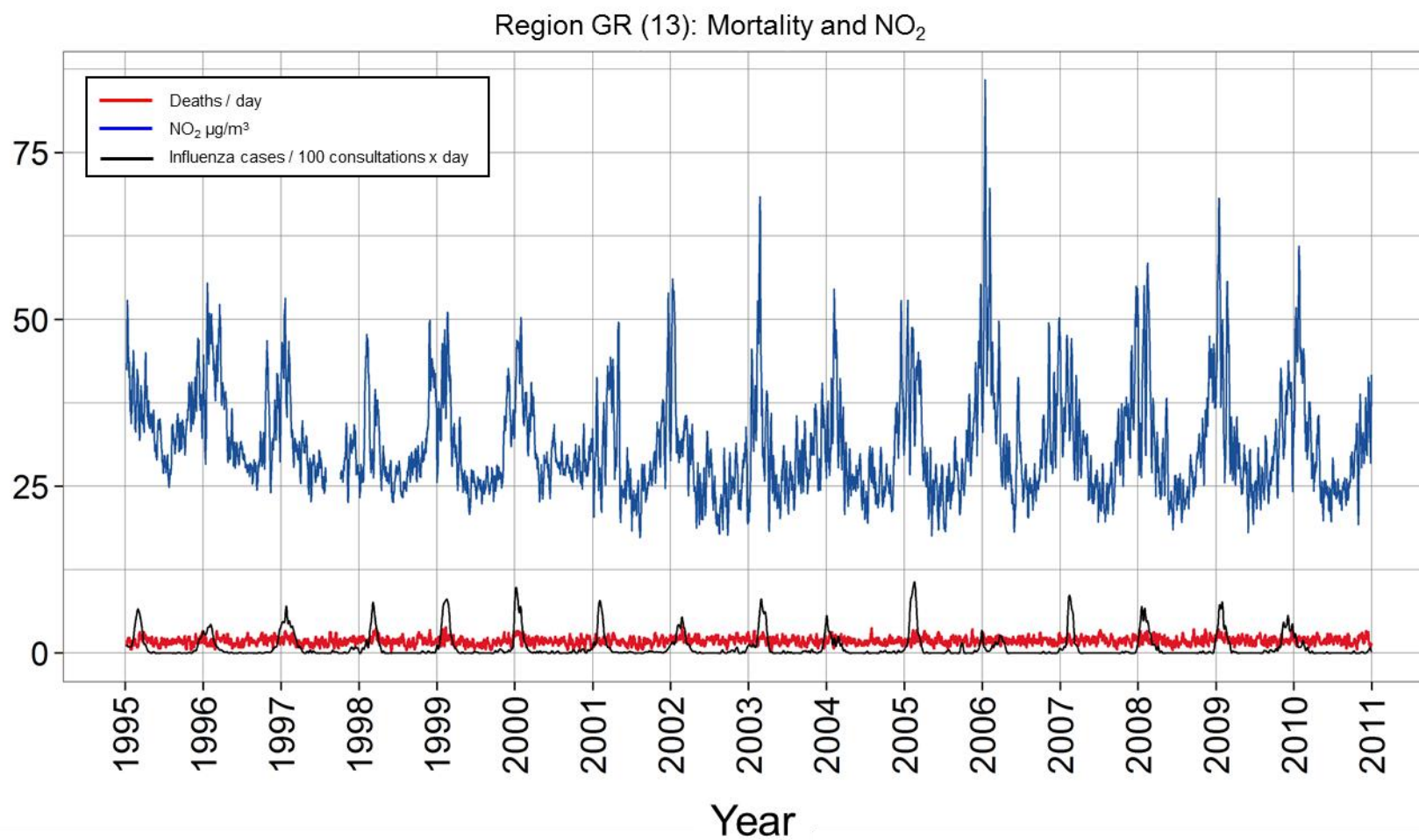


Figure A26. Region GR (13): Time course of the daily numbers of deaths due to medical causes, of the NO₂ daily mean concentration and of the influenza daily number of cases per 100 doctor consultations for the period 1995 to 2010. A seven day moving average was used to smooth the lines for better visualization.

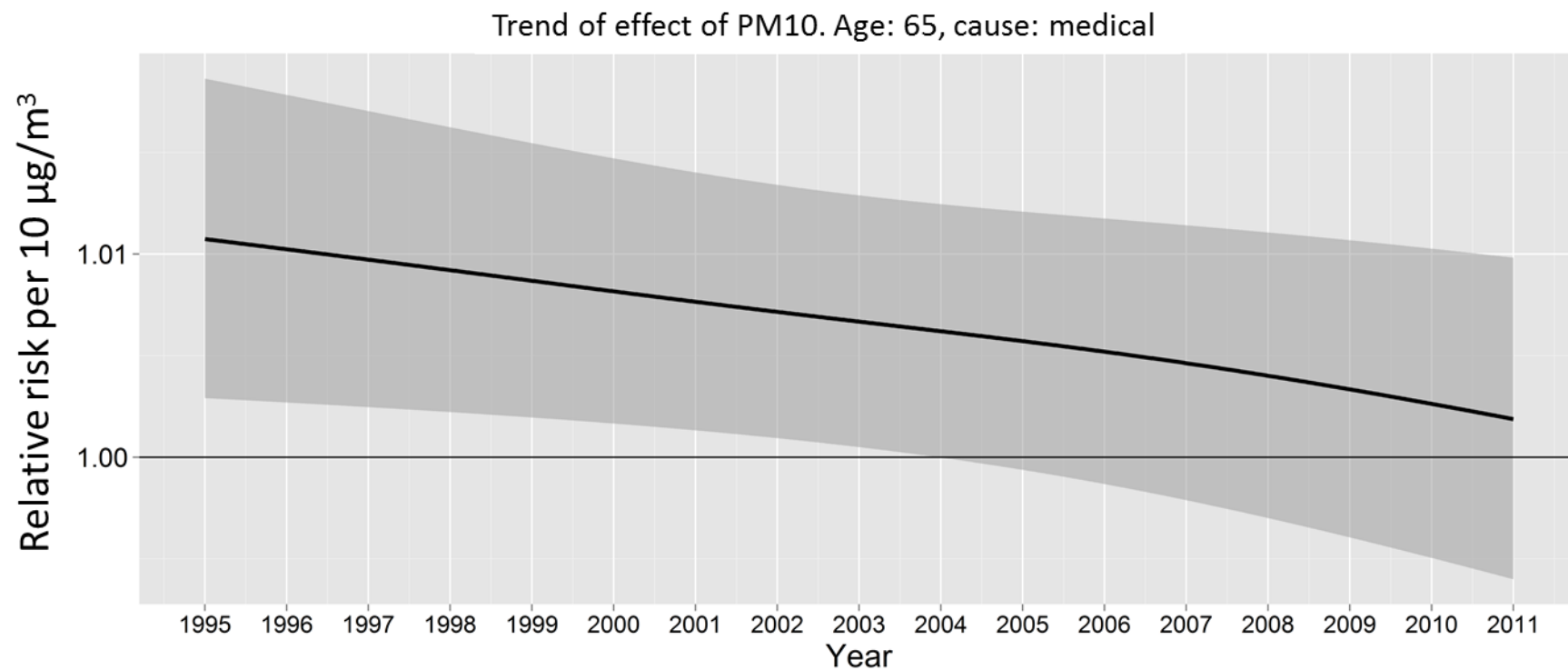


Figure A27. Linear trend of the effect of PM10 on mortality from medical causes for persons aged ≥ 65 years. The effect is given as relative risk for a $10 \mu\text{g}/\text{m}^3$ increase in the mean level of PM10 on the day of the event and the day before the event. The grey bands represent the 95% confidence intervals.

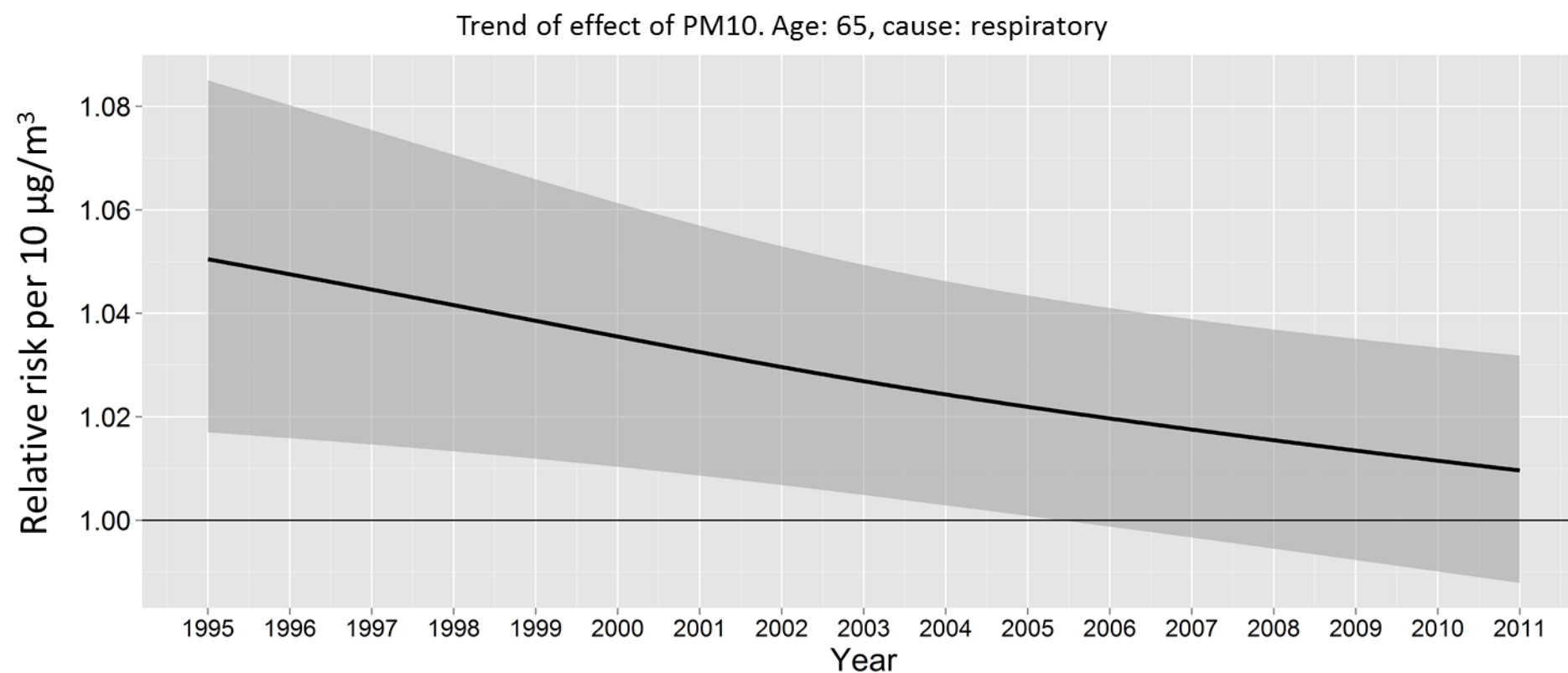


Figure A28. Linear trend of the effect of PM10 on mortality from respiratory causes for persons aged ≥ 65 years. The effect is given as relative risk for a 10 $\mu\text{g}/\text{m}^3$ increase in the average level of PM10 over the day of the event and the three days preceding the event. The grey bands represent the 95% confidence intervals.