APPENDIX AVAILABLE ON REQUEST

Research Report 142

Air Pollution and Health: A European and North American Approach (APHENA)

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Appendix D. Mortality and Hospital Admission Tables Describing the Canada, Europe, and United States Data Sets

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but did not undergo the HEI scientific editing and production process.

APPENDIX TABLE D.1.
DESCRIPTIVE TABLE FOR THE CANADIAN MORTALITY DATA SETS

City	Years	Population 91 (/1000)	Temperature (^{o}C)	Total no of deaths Mean	Total no of deaths ≥75yrs Mean	Total no of deaths <75yrs Mean	CVD no of deaths ≥75yrs Mean	CVD no of deaths <75yrs Mean	Respiratory no of deaths, all ages, Mean	Respiratory no of deaths ≥75yrs, Mean
Calgary	1/87-12/96	711	4.5	10	5	5	2	2	1	1
Edmonton	1/87-12/96	617	2.9	11	5	6	3	2	1	1
Halifax	1/87-12/96	231	6.1	6	3	3	1	1	1	0
Hamilton	1/87-12/96	319	7.7	10	4	5	2	2	1	1
Montreal	1/87-12/96	1,776	6.4	49	22	26	11	8	4	3
Ottawa	1/87-12/96	880	6.1	15	7	8	4	3	1	1
Quebec	1/87-12/96	540	4.4	17	8	9	4	3	2	1
Saint John	1/87-12/96	103	5.0	3	1	1	1	1	0	0
Toronto	1/87-12/96	2,276	7.8	48	23	25	11	7	4	3
Vancouver	1/87-12/96	1,832	10.5	29	16	14	8	4	3	2
Windsor	1/87-12/96	191	9.6	6	3	3	2	1	0	0
Winnipeg	1/87-12/96	615	2.7	14	7	7	4	2	1	1

APPENDIX TABLE D.1. (continued)
DESCRIPTIVE TABLE FOR THE CANADIAN MORTALITY DATA SETS

						Ozone 1h ($\mu g/m^3$)			PM_{10} ($\mu g/m^3$)		
City	Years	No of obs Ozone	Type of missing Ozone	No of obs PM_{10}	Type of missing PM_{10}	25^{th} centile	Median	75^{th} centile	25^{th} centile	Median	75^{th} centile
Calgary	1/87-12/96	3653	Random	540	Systematic 1/6	12.5	16.5	20.5	14.6	21.0	30.5
Edmonton	1/87-12/96	3650	Random	503	Systematic 1/6	11.0	15.2	20.0	13.4	20.3	30.0
Halifax	1/87-12/96	3356	Random	528	Systematic 1/6	10.5	14.0	17.5	10.9	14.6	20.1
Hamilton	1/87-12/96	3653	Random	374	Systematic 1/6	11.1	15.5	22.0	17.4	26.1	38.8
Montreal	1/87-12/96	3652	Random	798	Systematic 1/6	9.4	13.1	17.9	16.5	22.8	33.0
Ottawa	1/87-12/96	3651	Random	376	Systematic 1/6	10.0	13.5	17.8	11.7	17.0	26.0
Quebec	1/87-12/96	3597	Random	271	Systematic 1/6	10.0	14.2	17.5	12.8	18.0	28.0
Saint John	1/87-12/96	3648	Random	1115	Systematic 1/6	13.0	16.2	20.0	7.0	11.4	17.6
Toronto	1/87-12/96	3653	Random	843	Systematic 1/6	11.1	15.2	21.2	15.3	23.5	33.1
Vancouver	1/87-12/96	3653	Random	474	Systematic 1/6	9.6	13.3	17.0	12.8	17.9	24.0
Windsor	1/87-12/96	3604	Random	850	Systematic 1/6	10.5	15.8	24.5	19.0	27.5	37.8
Winnipeg	1/87-12/96	3622	Random	485	Systematic 1/6	10.8	14.5	18.8	15.0	22.0	32.3

APPENDIX TABLE D.2.
DESCRIPTIVE TABLE FOR THE EUROPEAN MORTALITY DATA SETS

City	Years	Population (/1000)	Temperature (°C)	Total no of deaths Mean	Total no of deaths ≥75yrs Mean	Total no of deaths <75yrs Mean	CVD no of deaths ≥75yrs Mean	CVD no of deaths <75yrs Mean	Respiratory no of deaths, all ages, Mean	Respiratory no of deaths ≥75yrs, Mean
Athens	1/92-12/96	3,073	17.8	73	42	31	24	12	5	3
Barcelona	1/91-12/96	1,644	16.4	40	24	16	11	4	3	3
Basel	1/90-12/95	360	10.7	9	6	3	3	1	1	1
Birmingham	1/92-12/96	2,300	9.6	61	35	26	17	11	9	6
Budapest	1/92-12/95	1,931	12.8	80	38	42	24	16	3	2
Cracow	1/90-12/96	746	8.0	18	8	10	6	4	0	0
Erfurt	1/91-12/95	216	8.8	6						
Geneva	1/90-12/95	317	10.9	6	4	2	2	1	0	0
Helsinki	1/90-12/96	828	5.9	18	10	8	6	3	1	1
Ljubljana	1/92-12/96	322	10.9	7	3	3	2	1	0	0
London	1/92-12/96	6,905	11.8	169	102	67	46	25	29	22
Lyon	1/93-12/96	416	12.4	9	6	3	2	1	1	1
Madrid	1/92-12/95	3,012	14.5	61	33	28	15	7	6	4
Milan	1/90-12/96	1,343	13.7	29	16	12	8	4	2	1
Netherlands	1/90-09/95	15,400	10.0	347	204	143	93	50	31	23
Paris	1/91-12/96	6,700	12	124	70	54	29	10	9	7
Prague	2/92-12/96	1,213	10	38	20	18	14	8	1	1
Rome	1/92-12/96	2,775	16.8	56	31	25	16	7	3	2
Stockholm	1/90-12/96	1,126	7.4	30	20	10	11	4	3	2
Tel-Aviv	1/92-12/96	1,141	20.4	27	17	10	8	4	2	1
Teplice	1/94-12/97	625	9	18	7	11	5	5	1	0
Torino	1/90-12/96	926	14.3	21	12	9	7	3	1	1
Valencia	1/94-12/96	753	18.6	16	9	7	4	2	2	1
Zurich	1/90-12/95	540	9.6	13	8	4	5	1	1	1

APPENDIX TABLE D.2. (continued)
DESCRIPTIVE TABLE FOR THE EUROPEAN MORTALITY DATA SETS

						Ozone 1h ($\mu g/m^3$)			PM_{10}* ($\mu g/m^3$)		
City	Years	No of obs Ozone	Type of missing Ozone	No of obs PM_{10}	Type of missing PM_{10}	25th centile	Median	75th centile	25th centile	Median	75th centile
Athens	1/92-12/96	1827	No missing	1794	Random	56.8	82.2	109.3	33.4	40.0	48.8
Barcelona	1/91-12/96	2192	Random	2170	Random	47.7	70.4	93.0	45.3	58.4	76.5
Basel	1/90-12/95	2184	Random	2191	Random	33.6	62.1	88.2	17.1	27.0	40.5
Birmingham	1/92-12/96	1415	Exclude 1992 and random	1652	Random	40.0	56.0	68.0	15.0	21.0	30.0
Budapest	1/92-12/95	1095	Available after 1993	1461	Random	57.0	81.0	108.0	34.3	40.0	45.6
Cracow	1/90-12/96			2546	Random				42.4	53.4	69.1
Erfurt	1/91-12/95	1695	Random	1707	Random	48.0	70.0	100.0	31.4	46.6	68.6
Geneva	1/90-12/95	2177	Random	2128	Random	35.3	63.2	92.9	21.7	33.0	50.1
Helsinki	1/90-12/96	2557	Random	1226	Available after 1993 and random	44.7	56.9	70.0	16.1	22.5	33.9
Ljubljana	1/92-12/96	1749	Random			37.0	73.0	112.0			
London	1/92-12/96	1786	Random	1685	Random	27.0	43.0	57.0	19.3	25.0	34.0
Lyon	1/93-12/96	1094	Available after 1994 and random	1424	Random	37.9	60.5	86.0	30.8	40.1	52.1
Madrid	1/92-12/95	1461	No missing	1461	No missing	31.0	51.7	76.0	26.9	32.8	41.8
Milan	1/90-12/96	2539	Random	2475	Random	10.5	37.5	85.0	34.8	46.9	63.7
Netherlands	1/90-09/95	2100	No missing	1362	Available after 1992 and random	47.3	65.6	84.7	24.8	33.4	49.6
Paris	1/91-12/96	2190	Random	1825	Exclude 1991 and random	20.2	38.1	56.3	14.5	19.7	27.9
Prague	2/92-12/96	1745	Random	1270	Random until 1995	47.6	73.4	108.4	46.9	65.0	91.4
Rome	1/92-12/96	1696	Random	1697	Random	22.3	39.6	62.2	46.4	56.3	69.2
Stockholm	1/90-12/96	2399	Random	961	Available after 1994 and random	51.7	63.2	76.6	9.8	13.1	19.2
Tel-Aviv	1/92-12/96	1816	Random	1418	Available after 1993 and random	24.3	35.8	47.0	32.0	42.0	55.0
Teplice	1/94-12/97	1420	Random	1075	Random	29.0	51.0	77.0	26.8	41.1	60.0
Torino	1/90-12/96	1282	Exclude 1990-1992 and random	2394	Random	29.0	81.0	129.0	45.6	65.0	93.4
Valencia	1/94-12/96	1092	Random			42.5	59.4	74.4			
Zurich	1/90-12/95	2190	Random	2191	No missing	35.7	62.8	93.2	18.5	27.5	38.9

*All available daily values included, for the years indicated above. The analysis was restricted to days<150 $\mu g/m^3$

APPENDIX TABLE D.3.

DESCRIPTIVE TABLE FOR THE US MORTALITY DATA SETS

City	Years	Population (/1000)	Temperature (^{o}C)	Total no of deaths Mean	Total no of deaths ≥75yrs Mean	Total no of deaths <75yrs Mean	CVD no of deaths ≥75yrs Mean	CVD no of deaths <75yrs Mean	Respiratory no of deaths, all ages, Mean	Respiratory no of deaths ≥75yrs, Mean
Akron	1/87-12/96	543	10.1	13	6	7	3	1	1	1
Albuquerque	1/87-12/96	557	14.2	10	4	6	2	1	1	1
Anchorage	1/87-12/96	260	2.7	5	2	3	0	0	0	0
Atlanta	1/87-12/96	1,482	17.3	23	10	13	5	2	2	1
Austin	1/87-12/96	813	20.6	8	4	4	2	1	1	0
Bakersfield	1/87-12/96	662	19	10	5	5	3	1	1	1
Baltimore	1/87-12/96	651	13.3	21	9	12	4	2	2	1
Baton Rouge	1/87-12/96	413	19.9	7	3	4	2	1	0	0
Birmingham	1/87-12/96	662	17	17	9	8	4	2	1	1
Boston	1/87-12/96	690	10.8	14	7	7	3	1	1	1
Buffalo	1/87-12/96	950	9.2	26	14	12	8	2	2	1
Charlotte	1/87-12/96	695	16.4	10	4	6	2	1	1	0
Chicago	1/87-12/96	5,376	9.9	117	57	60	30	11	9	6
Cincinnati	1/87-12/96	845	12.3	21	11	10	6	2	2	1
Cleveland	1/87-12/96	1,394	10.4	38	19	19	10	4	3	2
Columbus, OH	1/87-12/96	1,069	11.6	18	9	9	4	2	1	1
Colorado Springs	1/87-12/96	517	9.5	6	3	3	1	0	1	0
Corpus Christi	1/87-12/96	314	22.3	6	3	3	1	0	0	0
Dayton	1/87-12/96	559	11.3	13	6	7	3	1	1	1
Washington	1/87-12/96	572	12.7	17	6	11	3	2	1	1
Denver	1/87-12/96	1,407	10.6	19	9	10	5	2	2	1
Des Moines	1/87-12/96	375	10.2	8	4	4	2	1	1	0
Detroit	1/87-12/96	2,061	10.1	48	22	26	13	5	3	2
Dallas/Fort Worth	1/87-12/96	4,200	19	53	25	28	14	5	4	2
El Paso	1/87-12/96	680	18.1	9	4	5	2	1	1	0
Fresno	1/87-12/96	799	18	12	6	6	3	1	1	1
Fort Wayne	1/87-12/96	332	10.4	7	3	4	2	1	0	0
Grand Rapids	1/87-12/96	574	8.9	10	5	5	3	1	1	1
Greensboro	1/87-12/96	421	14.8	8	4	4	2	1	1	0
Honolulu	1/87-12/96	876	25.5	13	6	7	3	1	1	1
Houston	1/87-12/96	3,401	20.7	42	17	25	9	4	3	2
Huntsville	1/87-12/96	277	16.1	5	2	3	1	0	0	0

APPENDIX TABLE D.3. (continued)

DESCRIPTIVE TABLE FOR THE US MORTALITY DATA SETS

City	Years	Population (/1000)	Temperature (ºC)	Total no of deaths Mean	Total no of deaths ≥75yrs Mean	Total no of deaths <75yrs Mean	CVD no of deaths ≥75yrs Mean	CVD no of deaths <75yrs Mean	Respiratory no of deaths, all ages, Mean	Respiratory no of deaths ≥75yrs, Mean
Indianapolis	1/87-12/96	860	11.7	18	9	9	4	2	2	1
Jackson	1/87-12/96	251	18.2	6	3	3	2	1	0	0
Jacksonville	1/87-12/96	779	20.4	14	6	8	3	1	1	1
Jersey City	1/87-12/96	609	13.1	12	6	6	3	1	1	1
Kansas City, MO	1/87-12/96	913	12.4	19	10	9	5	2	2	1
Knoxville	1/87-12/96	382	14.9	8	4	4	2	1	1	0
Los Angeles	1/87-12/96	9,519	17.9	150	76	74	45	13	14	9
Las Vegas	1/87-12/96	1,375	20.1	16	6	10	3	2	2	1
Lexington	1/87-12/96	261	13.1	5	2	3	1	0	0	0
Lincoln	1/87-12/96	250	10.9	5	2	3	1	1	0	0
Louisville	1/87-12/96	694	14.2	17	9	8	4	2	2	1
Little Rock	1/87-12/96	362	17	8	4	4	2	1	1	0
Madison	1/87-12/96	427	8.2	6	3	3	2	0	1	0
Memphis	1/87-12/96	898	17	19	9	10	5	2	2	1
Miami	1/87-12/96	2,253	25.1	45	24	21	14	3	3	2
Milwaukee	1/87-12/96	940	9.1	23	13	10	7	2	2	1
Minneapolis/St. Paul	1/87-12/96	1,627	7.6	29	17	12	8	2	3	2
Mobile	1/87-12/96	400	19.4	9	4	5	2	1	1	0
Modesto	1/87-12/96	447	17.3	7	4	3	2	1	1	1
Nashville	1/87-12/96	570	15.5	11	6	5	3	1	1	1
New Orleans	1/87-12/96	485	20.4	13	6	7	3	1	1	0
Newark	1/87-12/96	794	13.1	19	8	11	4	2	1	1
New York	1/87-12/96	8,932	12.7	198	96	102	60	17	14	9
Oakland	1/87-12/96	1,444	15.5	23	12	11	6	2	2	1
Oklahoma City	1/87-12/96	661	15.7	14	7	7	4	1	1	1
Omaha	1/87-12/96	464	11.1	9	5	4	2	1	1	1
Orlando	1/87-12/96	896	22.7	12	6	6	3	1	1	1
Philadelphia	1/87-12/96	1,518	13.4	44	20	24	10	4	3	2
Phoenix	1/87-12/96	3,072	23.9	42	22	20	11	3	4	3
Pittsburgh	1/87-12/96	1,282	11	39	21	18	11	3	3	2
Portland	1/87-12/96	999	12.6	19	11	8	6	1	2	1
Providence	1/87-12/96	622	10.8	15	9	6	5	1	1	1
Raleigh	1/87-12/96	628	15.7	7	3	4	2	1	1	0

APPENDIX TABLE D.3. (continued)
DESCRIPTIVE TABLE FOR THE US MORTALITY DATA SETS

City	Years	Population (/1000)	Temperature (^{o}C)	Total no of deaths Mean	Total no of deaths ≥75yrs Mean	Total no of deaths <75yrs Mean	CVD no of deaths ≥75yrs Mean	CVD no of deaths <75yrs Mean	Respiratory no of deaths, all ages, Mean	Respiratory no of deaths ≥75yrs, Mean
Riverside	1/87-12/96	1,545	19.6	21	12	9	7	2	2	2
Rochester	1/87-12/96	735	9	15	9	6	4	1	1	1
Sacramento	1/87-12/96	1,224	17.1	18	9	9	5	2	2	1
Salt Lake City	1/87-12/96	898	11.8	10	5	5	3	1	1	1
San Antonio	1/87-12/96	1,393	20.9	21	10	11	5	2	2	1
San Bernardino	1/87-12/96	1,709	18.4	22	11	11	6	2	2	2
San Diego	1/87-12/96	2,814	17.7	43	23	20	12	3	5	3
San Francisco	1/87-12/96	777	14.5	18	9	9	5	1	2	1
San Jose	1/87-12/96	1,683	15.1	21	11	10	6	2	2	1
Seattle	1/87-12/96	1,737	11.7	26	15	11	7	2	3	2
Shreveport	1/87-12/96	351	18.7	9	4	5	2	1	1	0
Spokane	1/87-12/96	418	8.8	10	5	5	3	1	1	1
Santa Ana/Anaheim	1/87-12/96	2,846	18.2	34	19	15	11	3	4	2
St. Louis	1/87-12/96	348	14	11	6	5	3	1	1	1
Stockton	1/87-12/96	564	17.3	9	5	4	3	1	1	1
St. Petersburg	1/87-12/96	922	22.8	31	20	11	11	2	2	2
Syracuse	1/87-12/96	458	8.9	11	6	5	3	1	1	1
Tacoma	1/87-12/96	701	11.7	11	6	5	3	1	1	1
Tampa	1/87-12/96	999	22.8	18	9	9	5	2	2	1
Toledo	1/87-12/96	455	10.1	11	6	5	3	1	1	1
Tucson	1/87-12/96	844	21.2	15	8	7	4	1	2	1
Tulsa	1/87-12/96	563	15.9	11	6	5	3	1	1	1
Wichita	1/87-12/96	453	13.8	8	4	4	2	1	1	0
Worcester	1/87-12/96	751	8.5	16	9	7	5	1	2	1

APPENDIX TABLE D.3. (continued)
DESCRIPTIVE TABLE FOR THE US MORTALITY DATA SETS

					Ozone 1h ($\mu g/m^3$)			PM_{10} ($\mu g/m^3$)		
City	No of obs Ozone	Type of missing Ozone	No of obs PM_{10}	Type of missing PM_{10}	25th centile	Median	75th centile	25th centile	Median	75th centile
Akron	2103	Summer Only	1598	Systematic 1/6	43.9	61	78.5	19.6	25.4	33.4
Albuquerque	3653	Random	2548	Random	39.6	54.6	69.5	18.4	25.5	34.4
Anchorage	0	NA	3472	Random	NA	NA	NA	6.2	14	25.2
Atlanta	2718	Summer Only	614	Systematic 1/6	34.6	48.8	63	22	30	41.5
Austin	3640	Random	763	Systematic 1/6	40.7	53	68.9	16.2	20.9	27.1
Bakersfield	3653	Random	690	Systematic 1/6	48.7	75.3	99.9	27.2	41.8	59.3
Baltimore	2485	Summer Only	1579	Systematic 1/6	44.8	64.1	82.1	21.7	29.4	41.1
Baton Rouge	3653	Random	587	Systematic 1/6	31.5	44.5	59.7	20	26	32
Birmingham	2720	Summer Only	2675	Systematic 1/6	35.2	46.9	59.4	17.7	28.3	43.5
Boston	3601	Random	802	Systematic 1/6	21.5	36.1	52.8	17.7	24	31.8
Buffalo	3600	Random	611	Systematic 1/6	30.7	45.1	61.7	13.5	18.6	26.8
Charlotte	2382	Summer Only	575	Systematic 1/6	48	65.4	81	19.3	26.9	35.2
Chicago	3653	Random	3412	Random	24.3	38.1	53	21.6	30.8	43.3
Cincinnati	2140	Summer Only	2254	Random	37.6	51.6	65.1	21.8	30.6	42.2
Cleveland	2140	Summer Only	3106	Random	39.1	53.8	71.1	25.3	36.7	51.7
Columbus, OH	2140	Summer Only	2172	Systematic 1/6	36.7	52.5	68.5	19.6	26.3	36.6
Colorado Springs	3651	Random	3277	Random	31.9	47.3	60.7	16	21	29
Corpus Christi	3650	Random	1281	Systematic 1/6	34	46.8	65.6	19.5	25.5	33.1
Dayton	2124	Summer Only	819	Systematic 1/6	37.7	54.2	69.8	18.5	25.7	36
Washington	3578	Random	559	Systematic 1/6	22.3	37.5	57.3	18.6	26.2	36
Denver	3653	Random	2387	Random	23.9	39.7	57	17.7	25.1	34.5
Des Moines	3512	Random	1696	Systematic 1/6	13.9	26.9	41.1	19.5	28.1	41.4
Detroit	2227	Summer Only	3312	Random	30.9	45	59.5	20	31.1	47
Dallas/Fort Worth	3653	Random	1082	Systematic 1/6	38.7	53.3	70.6	17.9	23.9	32.3
El Paso	3653	Random	3281	Random	36.7	52.3	67.8	23.3	32.4	47.1
Fresno	3653	Random	668	Systematic 1/6	34	59.1	81.1	30.3	43.7	63.1
Fort Wayne	1953	Summer Only	441	Systematic 1/6	50.3	64.7	80.1	15	21	29
Grand Rapids	1978	Summer Only	895	Systematic 1/6	39.8	54.8	71.7	15.8	21.5	31.4
Greensboro	2133	Summer Only	567	Systematic 1/6	52.9	67.4	82.3	18	25.5	34.5
Honolulu	3422	Random	602	Systematic 1/6	9.6	26	43.5	12.5	15.4	18.7
Houston	3653	Random	1375	Systematic 1/6	30	40.8	57.5	16	24	35
Huntsville	2891	Summer Only	1908	Systematic 1/6	44.6	59.9	75.7	16	22.6	30.8

APPENDIX TABLE D.3. (continued)
DESCRIPTIVE TABLE FOR THE US MORTALITY DATA SETS

					Ozone 1h ($\mu g/m^3$)			PM_{10} ($\mu g/m^3$)		
City	No of obs Ozone	Type of missing Ozone	No of obs PM_{10}	Type of missing PM_{10}	25th centile	Median	75th centile	25th centile	Median	75th centile
Indianapolis	1954	Summer Only	1634	Systematic 1/6	48.4	62.7	77.8	20.1	27.9	39
Jackson	2741	Summer Only	508	Systematic 1/6	35.4	48.6	62.1	15.9	22.5	33.5
Jacksonville	3652	Random	686	Systematic 1/6	36.5	50	64.6	21.2	27.2	35
Jersey City	3570	Random	1685	Systematic 1/6	19.3	37.1	58.3	18.2	26.6	37.5
Kansas City, MO	3337	Summer Only	824	Systematic 1/6	41.3	57	73.6	18.9	25.1	33.6
Knoxville	2139	Summer Only	699	Systematic 1/6	46.7	60.6	75.2	22.7	31.4	42.2
Los Angeles	3653	Random	718	Systematic 1/6	24.6	45.2	63.9	29.9	41.2	54.5
Las Vegas	3637	Random	1331	Systematic 1/6	42.5	62.5	80.2	21.1	32.6	46.5
Lexington	2137	Summer Only	1512	Systematic 1/6	49	64.8	81	16.4	21.6	30.5
Lincoln	2107	Summer Only	0	NA	43.3	54.6	65.7	NA	NA	NA
Louisville	3072	Summer Only	606	Systematic 1/6	25.3	42.8	60.6	21.6	27.8	38.7
Little Rock	3653	Random	647	Systematic 1/6	41.5	55.8	70.6	20	27.5	37.5
Madison	2066	Summer Only	804	Systematic 1/6	45.7	60.7	74.2	14	20.3	29.7
Memphis	2140	Summer Only	602	Systematic 1/6	57	71.5	85	20	27.1	36
Miami	3613	Random	604	Systematic 1/6	39	51.4	66.5	19.4	23.9	29.3
Milwaukee	2050	Summer Only	971	Systematic 1/6	43.4	58.2	75.2	19.5	26.5	35.7
Minneapolis/St. Paul	0	NA	3395	Random	NA	NA	NA	15.4	21.9	31
Mobile	2688	Summer Only	617	Systematic 1/6	41	52.8	66.4	18.4	26.3	34.3
Modesto	3647	Random	198	Systematic 1/6	37	52.6	69.7	25	37.5	59
Nashville	3653	Random	2594	Random	23.9	37.6	53.4	22	30	40.5
New Orleans	3620	Random	653	Systematic 1/6	27.8	39.9	55.3	17.2	23	30.5
Newark	3452	Random	606	Systematic 1/6	15	27.7	45.8	22.6	32.2	44.6
New York	3652	Random	623	Systematic 1/6	22.5	34.3	50	19.1	24.8	34.1
Oakland	3653	Random	473	Systematic 1/6	24.5	34.7	45.5	16	24	34
Oklahoma City	3648	Random	692	Systematic 1/6	40.5	58	75.8	15.7	22.5	31.3
Omaha	2994	Summer Only	1726	Systematic 1/6	30.6	43.7	58.2	21.7	31	42
Orlando	3651	Random	567	Systematic 1/6	34.6	47.1	62.3	15	19.5	25
Philadelphia	3632	Random	617	Systematic 1/6	22.4	40.4	60	27.9	36.5	47.5
Phoenix	3650	Random	577	Systematic 1/6	33.2	49.7	64.3	32.8	42.2	51.8
Pittsburgh	3614	Random	3624	Random	22.9	38.7	56.2	16.2	26.3	41.6
Portland	1750	Summer Only	0	NA	31.2	40.8	51.3	NA	NA	NA
Providence	2062	Summer Only	607	Systematic 1/6	39.5	54.6	70.5	20.1	27.9	39

APPENDIX TABLE D.3. (continued)
DESCRIPTIVE TABLE FOR THE US MORTALITY DATA SETS

					Ozone 1h ($\mu g/m^3$)			PM_{10} ($\mu g/m^3$)		
City	No of obs Ozone	Type of missing Ozone	No of obs PM_{10}	Type of missing PM_{10}	25th centile	Median	75th centile	25th centile	Median	75th centile
Raleigh	1694	Summer Only	602	Systematic 1/6	55.2	70.1	84.2	16.9	22.8	30
Riverside	3653	Random	702	Systematic 1/6	41.1	66.8	93.1	25.7	40.5	51.9
Rochester	3614	Random	606	Systematic 1/6	30.4	43.9	60.5	13	17.9	26.1
Sacramento	3653	Random	673	Systematic 1/6	37.6	51.7	65.8	13.7	22.7	34.7
Salt Lake City	2715	Summer Only	3595	Random	46.9	64.2	78.4	19.9	30.5	44.6
San Antonio	3644	Random	792	Systematic 1/6	33.6	45.2	60.5	16.4	21.2	28.2
San Bernardino	3653	Random	719	Systematic 1/6	46.8	70.9	101.9	27.3	39.8	52.5
San Diego	3653	Random	814	Systematic 1/6	45.1	59.9	74.1	24	31.4	39.8
San Francisco	0	NA	600	Systematic 1/6	NA	NA	NA	17	25	37
San Jose	3653	Random	1098	Systematic 1/6	25	36.1	46.7	17.9	25.7	38.5
Seattle	2248	Summer Only	3477	Random	31.4	42.7	53.5	15.1	22.5	33.4
Shreveport	3653	Random	573	Systematic 1/6	43.8	56.2	69.7	16.8	22.4	29.5
Spokane	1396	Summer Only	3094	Random	54.1	64.7	76.1	16.7	27.4	42.3
Santa Ana/Anaheim	3653	Random	601	Systematic 1/6	28.8	48.4	65.2	30.2	39.2	49.1
St. Louis	2159	Summer Only	609	Systematic 1/6	37.6	50.3	62.3	21.5	28.2	38
Stockton	3629	Random	599	Systematic 1/6	34.6	49.9	63.2	24	33	49.1
St. Petersburg	3653	Random	492	Systematic 1/6	35.1	47.7	63.4	17.2	22.2	28.3
Syracuse	3594	Random	607	Systematic 1/6	29.9	43.4	60.1	17.6	23.8	32.1
Tacoma	2664	Summer Only	1674	Systematic 1/6	24.8	35.5	47.9	14.2	23.4	36.4
Tampa	3653	Random	637	Systematic 1/6	38	49.8	65.1	20.1	25	30.7
Toledo	2139	Summer Only	594	Systematic 1/6	39.6	55.3	71.4	16.2	24	32.9
Tucson	3653	Random	1762	Systematic 1/6	40.5	55	68.3	15.4	22.9	30.4
Tulsa	3529	Random	704	Systematic 1/6	45.9	62.6	78.9	16.7	22.9	29.9
Wichita	3644	Random	574	Systematic 1/6	33.8	47.8	63.3	18.2	25.3	35.2
Worcester	2481	Summer Only	573	Systematic 1/6	46.3	60.8	77.9	14	20	29

APPENDIX TABLE D.4.
CANADIAN HOSPITAL ADMISSIONS

City	Population /1000	Start/end dates	Temp (°C)	Mean Cardiac 65+ y.	Mean Respiratory 65+ y.	No of obs PM_{10}	Type of missing PM_{10}	No of missing obs O_3	Type of Missing O_3	Descriptive Statistics PM_{10} ($\mu g/m^3$)			Descriptive Statistics O_3-1h ($\mu g/m^3$)		
										25^{th} centile	Median	75^{th} centile	25^{th} centile	Median	75^{th} centile
Calgary	768	1/93-1/96	3.4	11	5	1237	measured every 6 days	0	N/A	14.3	20.0	27.3	12.5	16.3	20.2
Edmonton	616	1/93-1/96	1.8	9	4	1234	measured every 6 days	0	N/A	10.8	15.6	24.1	11.3	15.0	19.5
Halifax	233	1/93-1/96	6.2	5	2	1069	measured every 6 days	17	**random**	10.0	12.9	16.7	12.0	14.5	17.5
Hamilton	322	1/93-1/96	7.3	10	3	1087	measured every 6 days	0	N/A	17.4	26.1	38.9	11.4	15.5	21.8
Montreal	1,776	1/93-1/96	6.2	38	16	947	measured every 6 days	0	N/A	13.8	19.4	27.6	9.8	13.1	17.7
Ottawa	939	1/93-1/96	5.9	12	5	1255	measured every 6 days	0	N/A	9.8	14.3	21.4	10.8	13.8	17.8
Quebec	556	1/93-1/96	4.2	13	5	1273	measured every 6 days	8	**random**	10.7	16.0	22.4	12.0	15.0	18.8
Saint John	102	1/93-1/96	4.9	5	2	447	measured every 6 days	0	N/A	6.8	11.0	16.8	12.3	14.8	17.8
Toronto	1,385	1/93-1/96	7.4	50	19	892	measured every 6 days	0	N/A	14.7	21.5	30.9	11.8	16.1	21.8
Vancouver	1,603	1/93-1/96	10.4	36	14	1248	measured every 6 days	0	N/A	10.0	14.0	19.4	9.7	13.3	16.5
Windsor	198	1/93-1/96	9.2	7	3	1012	measured every 6 days	0	N/A	17.8	26.4	36.6	11.0	16.3	24.3
Winnipeg	619	1/93-1/96	1.9	12	6	1252	measured every 6 days	0	N/A	12.8	18.6	27.6	10.3	13.3	17.5

APPENDIX TABLE D.5.
EUROPEAN HOSPITAL ADMISSIONS

City	Population /1000	Start/end dates	Temp (°C)	Mean Cardiac 65+ y.	Mean Respiratory 65+ y.	No of obs PM10	Type of missing PM10	No of obs O3	Type of Missing O3	Descriptive Statistics PM10 (µg/m^3)			Descriptive Statistics O3-1h (µg/m^3)		
										25th centile	Median	75th centile	25th centile	Median	75th centile
Barcelona	1,644	1/94-12/96	16.8	11	11	1096	Random	1096	Random	42.4	53.3	66	51.4	74.7	96.9
Birmingham	2,300	1/92-12/94	10	30	19	933	Random	911	Random	15.5	15.5	21.5	15.5	21.5	30
London	6,905	1/92-12/94	12	81	58	983	Random	1064	Random	20	24.9	34	29	43.5	57
Milan	1,343	1/90-12/97	14	25	9	2839	Random	2899	Random	35.4	46.1	61.7	12.3	42.3	88.8
Amsterdam	1,540	1/88-9/95	10.2		54	1364	Random	2829	Random	25.7	33.5	48.9	48.6	67.8	88
Paris	6,700	1/92-9/96	12.3	67	23	1731	Random	1734	Random	15.1	20.1	27.6	21.5	38.8	57.4
Rome	2,775	1/95-10/97	16.2	55	19	930	Random	1034	Random	43.6	51.9	59.5	31.7	50	72.5
Stockholm	1,126	1/88-12/96	7.5	28	5	1005	Random	3044	Random	10.2	13.6	18.9	58.9	70.3	84.3

APPENDIX TABLE D.6.
DESCRIPTIVE TABLE FOR US HOSPITAL ADMISSIONS DATA SETS

City	Population /1000	Start/end dates	Temp (°C)	Mean Cardiac 65+ y.	Mean Respiratory 65+ y.	No of obs PM_{10}	Type of missing PM_{10}	No of obs O_3	Type of Missing O_3	Descriptive Statistics PM_{10} ($\mu g/m^3$)			Descriptive Statistics O_3-1h ($\mu g/m^3$)		
										25^{th} centile	Median	75^{th} centile	25^{th} centile	Median	75^{th} centile
Birmingham, AL	662	1/87 - 12/93	17,2	17	11	2400	random	1914	summer	21.6	31.4	45.4	76.6	98.6	125.4
Boulder, CO	291	1/89 - 12/94	11,1	2	1	1819	random	1873	random	16.5	22.0	29.0	68.6	90.2	117.6
Canton, OH	378	1/89 - 12/94	10,6	10	5	1624	random	1272	summer	20.0	25.8	34.5	82.8	107.6	134.9
Chicago, IL	5,377	1/88 - 12/94	10	102	53	2338	random	2543	random	25.3	32.9	44.2	52.0	68.4	92.2
Colorado Springs, CO	516	1/87 - 12//94	9,4	3	2	2380	random	2677	random	18.6	23.4	31.1	70.0	86.6	103.9
Detroit, MI	2,061	1/86 - 12//94	10,6	50	23	2746	random	2089	86-88 all,after summer	22.8	33.0	47.0	60.8	83.1	111.8
Minneapolis/ St Paul, MN	1,627	1/87 - 12/94	8,3	17	10	2659	random	NA	NA	18.0	24.3	34.0			
Nashville, TN	570	1/89 - 12/94	13,3	10	6	1577	random	1931	random	22.6	29.7	39.0	44.3	68.4	97.4
New Haven, CT	824	1/87 - 12//91	11,1	16	8	1465	random	1019	summer	18.6	26.3	36.9	70.1	92.2	124.7
Pittsburgh, PA	1,282	1/87 - 12/94	11,1	48	24	2872	random	2801	random	21.3	31.0	46.1	56.6	78.0	107.7
Provo/Orem, UT	368	1/87 - 12/94	12,2	2	1	2605	random	1111	summer	22.2	30.4	42.4	103.9	117.6	133.3
Seattle, WA	1,737	1/86 - 12/94	11,7	17	9	3173	random	2069	summer	19.5	26.9	37.7	56.0	71.5	91.7
Spokane, WA	418	1/85 - 12/94	8,9	6	3	2703	random	927	Mostly missing	24.4	36.5	54.5	74.5	86.3	101.0
Youngstown, OH	369	1/89 - 12/92	10	12	6	1207	random	773	summer	23.1	30.4	41.0	72.5	98.0	133.3