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Research Report 195

**Impacts of Regulations on Air Quality and Emergency
Department Visits in the Atlanta Metropolitan Area, 1999–2013**

Russell et al.

**APPENDIX C. BACKGROUND DEMOGRAPHIC INFORMATION
AND HOSPITAL INFORMATION**

This Appendix was reviewed solely for spelling, grammar, and cross-references to the main text. It has not been formatted or fully edited by HEI. This document was reviewed by the HEI Review Committee.

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HEI Research Report 195 Russell Appendix C (Available on the HEI Website)

APPENDIX C. BACKGROUND DEMOGRAPHIC AND HOSPITAL INFORMATION

The population in the 5-county Atlanta metropolitan area grew from 2.85 million people in 1999 to 3.54 million in 2013, a 24.2% increase (Figure C.1). The current PM_{2.5} 20-county Atlanta nonattainment area (ANAA) grew from 4.01 million people in 1999 to 5.35 million in 2013 (a 33.5% increase), while the entire state of Georgia increased in population 24.2% during this time, from 8.05 to 9.99 million. The Atlanta metropolitan area is racially diverse, in the 5-county area in 2000, 50.8% of the population were non-Hispanic white, 35.3% were non-Hispanic black, 7.9% were Hispanic/Latino, 4.2% were non-Hispanic Asian, and 1.8% were other race (Table C.1). This diversity increased by 2010: 40.3% of the population were non-Hispanic white, 38.4% were non-Hispanic black, 12.5% were Hispanic/Latino, 6.4% were non-Hispanic Asian, and 2.4% were other race.

References

American Community Survey website. www.census.gov/programs-surveys/acs/ [accessed 1 May 2017].

U.S. Decennial Census (www.census.gov/programs-surveys/decennial-census/decade.html) [accessed 1 May 2017]

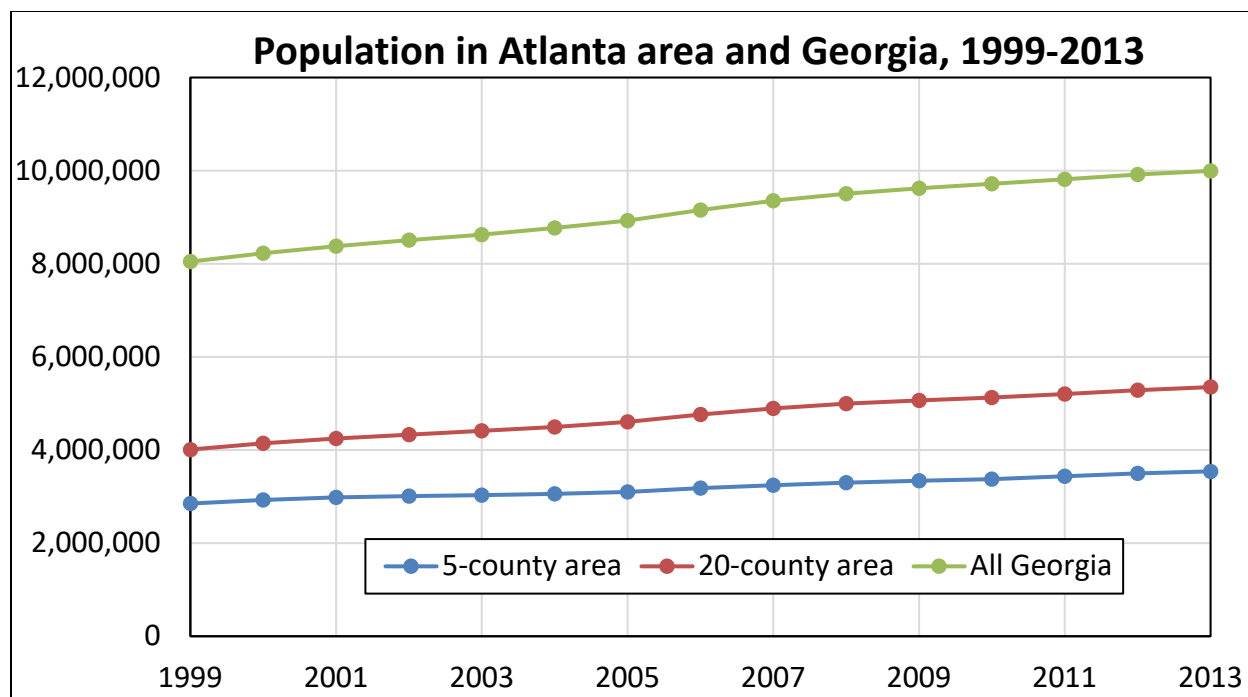


Figure C.1. Population in the 5-county and 20-county Atlanta metropolitan area and the state of Georgia, 1999–2013, U.S. Census Bureau annual estimates.

Race/ethnicity	2000	2010
NonHispanic White	50.8	40.3
NonHispanic Black	35.3	38.4
Hispanic/Latino	7.9	12.5
NonHispanic Asian	4.2	6.4
Other	1.8	2.4

^a U.S. Census Bureau decennial census (2000, 2010)

Between 2000 and 2010, the proportion of the population in older groups increased in the 5-county area. The proportion of the population who were 45–64 year old males grew from 9.8% to 11.7%, the proportion of the population who were 65 and older males grew from 2.8% to 3.4%, the proportion of the population who were 45–64 year old females grew from 10.6% to 13.0%, and the proportion of the population who were 65 and older females grew from 4.4% to 4.8%. The per capita income (adjusted for inflation to December 2013 dollars) decreased from

\$35,139 to \$30,068 from 1999–2013, while the percent unemployed rose from 4.0% to 7.0% and the percent of families under the federal poverty level rose from 7.6% to 12.7%. However, the educational attainment of the 5-county population rose as well, with the proportion of the population having high school education level or higher increasing from 85.6% to 88.9% from 1999–2013, and the proportion of the population having a bachelor’s degree or higher increasing from 36.5% to 40.1% from 1999–2013.

Table C.2. Percent population by sex and age group, 5-county Atlanta area^a		
Group	2000	2010
Male		
Under 18	13.3	13.2
18–24	5.2	4.9
25–44	18.2	15.3
45–64	9.8	11.7
65 and older	2.8	3.4
Female		
Under 18	12.7	12.7
18–24	4.8	4.8
25–44	18.1	16.1
45–64	10.6	13.0
65 and older	4.4	4.8

^a U.S. Census Bureau decennial census (2000, 2010)

Variable^b	2000	2005	2009	2013
Per capita income	\$35,139	\$34,932	\$31,443	\$30,068
Percent unemployed	4.0	5.1	8.5	7.0
Percent of families under poverty level	7.6	9.7	11.5	12.7
Percent high school graduate or higher	85.6	88.0	88.0	88.9
Percent bachelor's degree or higher	36.5	39.6	38.8	40.1

^a U.S. Census Bureau decennial census (2000) and U.S. Community Survey (2005, 2009, 2013)

^b Percent unemployed are among population aged 16 or older, educational attainment is among population aged 25 or older.

Table C.4. Descriptive information for individual Atlanta area hospitals in hospital database, 1999–2013 (names omitted for confidentiality)

Hospital	Period in database		Days w/records	Days missing	% missing	Emergency department visits (20-county area)				
	Start date	End date				RD	Asthma	CVD	CHF	Total
1	1/1/1999	12/15/2013	5,424	39	0.7%	40,698	11,021	12,893	4,378	580,340
2	5/1/2003	12/15/2013	3,881	1	0.0%	23,594	2,149	3,520	970	204,092
3	1/1/1999	12/15/2013	5,463	0	0.0%	52,513	6,416	10,371	1,793	583,540
4	1/1/1999	12/15/2013	5,463	0	0.0%	119,784	23,316	29,267	6,424	1,149,954
5	1/1/1999	12/15/2013	5,461	2	0.0%	25,119	7,722	24,547	9,071	567,080
6	1/1/1999	12/15/2013	5,463	0	0.0%	56,849	8,536	16,092	3,763	620,205
7	7/18/2005	12/15/2013	3,072	1	0.0%	32,245	9,239	6,615	2,140	396,770
8	1/1/1999	12/15/2013	5,414	49	0.9%	64,349	15,819	26,422	7,891	877,985
9	1/1/1999	12/18/2006	2,787	122	4.2%	5,879	890	1,102	226	82,007
10	1/1/1999	12/15/2013	5,463	0	0.0%	23,651	4,438	5,512	1,072	282,659
11	1/1/1999	12/15/2013	5,463	0	0.0%	88,593	43,517	1,294	243	655,774
12	2/5/2007	12/15/2013	2,458	48	1.9%	5,743	1,319	4,299	898	128,539
13	1/1/1999	12/15/2013	5,463	0	0.0%	49,589	12,339	15,363	2,816	674,140
14	1/1/1999	12/15/2013	5,369	94	1.7%	9,789	2,142	18,163	4,887	295,939
15	1/1/1999	12/15/2013	5,341	122	2.2%	39,870	9,648	18,933	4,347	602,623
16	1/1/2001	12/15/2013	4,732	0	0.0%	30,619	5,256	17,090	3,579	499,854
17	7/1/2001	12/15/2013	4,511	40	0.9%	116,636	70,688	24,822	9,401	1,691,979
18	1/1/1999	12/15/2013	5,463	0	0.0%	108,248	33,991	41,735	8,790	1,635,250
19	1/1/1999	10/31/2013	5,412	6	0.1%	58,692	9,951	22,561	6,259	787,394
20	1/1/1999	12/15/2013	5,463	0	0.0%	127,489	20,585	57,860	11,052	1,527,051
21	11/1/1999	12/15/2013	5,092	67	1.3%	12,930	1,123	4,333	1,023	154,726
22	11/1/1999	12/15/2013	5,159	0	0.0%	30,071	4,487	9,911	2,055	393,299
23	1/1/1999	12/15/2013	5,463	0	0.0%	26,383	5,832	13,589	2,262	469,093
24	1/1/1999	12/11/2006	2,901	1	0.0%	9,356	2,966	1,626	437	122,651
25	1/1/1999	12/15/2013	5,368	95	1.7%	27,677	5,403	10,546	2,876	396,073
26	1/1/1999	12/15/2013	5,463	0	0.0%	30,007	7,131	18,075	3,127	692,772
27	8/1/2002	12/15/2013	4,124	31	0.7%	38,887	4,970	9,351	2,433	371,918
28	1/1/1999	12/15/2013	5,463	0	0.0%	43,145	4,277	6,945	1,425	425,780
29	1/1/1999	12/15/2013	5,463	0	0.0%	28,684	7,675	32,603	8,124	633,807
30	1/1/1999	8/31/2000	609	0	0.0%	2,469	362	201	23	27,748
31	1/1/1999	12/15/2013	5,463	0	0.0%	44,056	7,660	16,712	4,215	540,059
32	6/14/1999	12/31/2012	3,189	1,761	35.6%	26,128	7,639	7,654	2,519	320,652
33	1/1/2000	12/15/2013	4,678	420	8.2%	12,479	2,469	26,145	4,953	304,432
34	1/1/1999	12/15/2013	5,417	46	0.8%	101,389	20,810	30,871	8,918	1,053,896
35	1/1/1999	12/15/2013	5,463	0	0.0%	43,020	7,682	11,979	3,068	478,237
36	1/1/1999	12/15/2013	5,462	1	0.0%	124,664	55,326	935	45	1,083,219
37	1/1/2000	12/31/2004	1,827	0	0.0%	8,237	1,619	1,113	274	66,307
38	11/1/1999	12/15/2013	5,157	2	0.0%	37,050	5,019	15,052	2,886	481,315
39	11/1/1999	12/15/2013	5,155	4	0.1%	36,873	3,324	5,739	1,183	360,745
40	10/1/2003	12/15/2013	3,637	92	2.5%	23,307	2,181	5,327	1,130	240,266
41	1/1/1999	10/31/1999	304	0	0.0%	369	45	51	7	4,991
42	1/2/2005	12/15/2013	1,727	1,543	47.2%	241	9	206	112	3,002
Total for all hospitals			190,150	4587	2.4%	1,787,371	456,991	587,425	143,095	22,468,163