



# Epi Data Tables

New York City Department of Health and Mental Hygiene

January 2015, No. 53

## Trends in Blood Sugar Control among Adults with Diabetes in New York City, 2006-2012

### Data Tables

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### Data Source

**New York City A1C Registry:** The NYC A1C Registry (Registry) was created in 2006 and contains A1C results of NYC residents tested by clinical laboratories via a mandatory reporting system. All data presented in this report are limited to NYC adults ages 18 and older at the time of their first reported result in the Registry and who had at least two A1C test values of 6.5% or greater at any point in time since inception of the Registry in 2006 through 2012. This definition utilizes the American Diabetes Association-recommended A1C cut-point of 6.5% to determine diabetes since the Registry does not contain diagnosis codes.

[To access the related Epi Data Brief, go to nyc.gov/health/html/doh/downloads/pdf/epi/databrief53.pdf](http://nyc.gov/health/html/doh/downloads/pdf/epi/databrief53.pdf)



**Table 1: Blood sugar control among adults with likely diabetes who received medical care, New York City, 2006-2012**

Source: New York City A1C Registry, 2006-2012; restricted to NYC residents ages 18 and older at time of entering the registry

Rates are based on the latest A1C test result with the last available NYC zip code in each calendar year for registrants reported to the A1C Registry with likely diabetes who received medical care, defined as having a history of at least two A1C test values  $\geq 6.5\%$  between 2006 and 2012.

Year	Number (n)					Percent (%)				Mean and median of A1C test result			
	A1C Category (A1C %)					A1C Category (A1C %)				Mean	Median	IQR25	IQR75
	<7%	7-7.9%	8-9%	>9%	Total	<7%	7-7.9%	8-9%	>9%				
2006	96,819	54,638	28,019	34,451	213,927	45.3	25.5	13.1	16.1	7.6	7.1	6.5	8.2
2007	140,038	77,672	39,695	50,443	307,848	45.5	25.2	12.9	16.4	7.6	7.1	6.5	8.2
2008	158,257	82,131	42,627	54,733	337,748	46.9	24.3	12.6	16.2	7.6	7.0	6.4	8.2
2009	176,058	107,143	53,904	67,815	404,920	43.5	26.5	13.3	16.7	7.7	7.1	6.5	8.3
2010	197,452	117,204	58,190	71,029	443,875	44.5	26.4	13.1	16.0	7.6	7.1	6.5	8.2
2011	213,808	121,169	60,020	77,538	472,535	45.2	25.6	12.7	16.4	7.6	7.1	6.5	8.2
2012	204,751	123,285	63,228	79,472	470,736	43.5	26.2	13.4	16.9	7.7	7.1	6.5	8.3

Percentages may not add to 100 due to rounding

**Table 2: Blood sugar control change among adults with likely diabetes who received medical care, by demographic characteristics, New York City, 2006-2008 through 2012**

Source: New York City A1C Registry, 2006-2012; restricted to NYC residents ages 18 and older at time of initial entry into the registry between 2006-2008

Changes are calculated from the first test in 2006-2008 and the last test in 2012 for registrants reported to the A1C Registry with likely diabetes who received medical care, defined as having a history of at least two A1C test values  $\geq 6.5\%$  between 2006 and 2012.

	Total <sup>3</sup>			Change in A1C control from the first test (A1C %)																	
	Number	Percent <sup>6</sup>			<7.0% <sup>3</sup>			7.0-7.9% <sup>3</sup>			8.0-9.0% <sup>4</sup>			>9.0% <sup>5</sup>							
		Better <-0.5%	Same -0.5% to 0.5%	Worse >0.5%	Number	Better <-0.5%	Same -0.5% to 0.5%	Worse >0.5%	Number	Better <-0.5%	Same -0.5% to 0.5%	Worse >0.5%	Number	Better <-0.5%	Same -0.5% to 0.5%	Worse >0.5%	Number	Better <-0.5%	Same -0.5% to 0.5%	Worse >0.5%	
<b>First test in 2006-2008<sup>1</sup></b>																					
<b>Overall</b>	<b>132,219</b>	<b>31</b>	<b>38</b>	<b>31</b>	<b>58,748</b>	<b>7</b>	<b>51</b>	<b>42</b>	<b>33,414</b>	<b>32</b>	<b>40</b>	<b>28</b>	<b>17,141</b>	<b>53</b>	<b>24</b>	<b>23</b>	<b>22,916</b>	<b>77</b>	<b>11</b>	<b>12</b>	
<b>Age group</b>																					
18-44	12,200	35	28	38	4,345	5	37	58	2,521	25	35	40	1,652	42	24	34	3,682	72	13	15	
45-64	67,868	33	36	32	28,196	6	49	45	16,569	30	40	30	9,313	51	24	25	13,790	77	11	12	
65+	52,151	29	43	27	26,207	8	56	36	14,324	36	41	23	6,176	58	24	18	5,444	82	10	9	
<b>Sex</b>																					
Female	76,869	30	39	31	34,575	7	52	41	19,891	32	41	27	9,842	52	25	23	12,561	76	12	13	
Male	54,551	33	36	31	23,836	7	50	43	13,331	33	39	28	7,172	54	23	23	10,212	80	10	10	
Unknown	799	29	37	34	337	6	50	45	192	29	37	34	127	46	31	24	143	67	15	18	
<b>Neighborhood poverty<sup>2</sup></b>																					
Low poverty	22,036	28	42	30	11,313	7	54	39	5,593	33	42	26	2,477	54	26	21	2,653	78	11	11	
Medium poverty	47,024	30	40	30	21,546	7	53	40	12,262	32	42	27	5,909	54	24	22	7,307	78	11	11	
High Poverty	34,043	33	37	31	14,619	7	50	43	8,495	32	39	29	4,482	52	24	24	6,447	77	11	12	
Very high poverty	29,047	35	33	32	11,243	7	46	47	7,048	32	37	30	4,263	51	24	25	6,493	77	11	12	
Unknown	69	35	42	23	27	4	74	22	16	31	38	31	10	60	20	20	16	75	6	19	
<b>Borough</b>																					
Bronx	30,142	35	33	32	12,030	7	46	47	7,446	33	37	30	4,276	52	23	24	6,390	77	11	12	
Brooklyn	39,188	33	37	30	16,477	7	52	41	9,945	33	39	28	5,365	52	25	23	7,401	78	11	12	
Manhattan	19,045	30	39	32	9,091	7	51	42	4,668	32	40	27	2,315	52	25	23	2,971	76	11	13	
Queens	35,163	29	42	30	16,759	7	54	39	9,103	31	43	26	4,200	53	24	22	5,101	77	11	12	
Staten Island	8,614	27	40	33	4,365	6	51	43	2,237	32	40	28	975	54	24	22	1,037	80	11	10	
Unknown	67	34	43	22	26	4	77	19	15	27	40	33	10	60	20	20	16	75	6	19	

Percentages may not add to 100 due to rounding

1. Includes only those who had at least one test every subsequent year, and who lived in the same zip code between the first and last test.

2. Neighborhood income level are defined as: very high poverty (30% or more residents living at or below Federal Poverty Level [FPL]), high poverty (20 to <30% residents living at or below FPL), medium poverty (10 to <20% residents living at or below FPL), low poverty (0 to <10% residents living at or below FPL).

3. Chi square tests are significant for all demographic variables (p<0.01).

4. Chi square tests are significant for demographic variables of age group, neighborhood poverty (both p<0.01) and sex (p<0.05).

5. Chi square tests are significant for demographic variables of age group and sex (both p<0.01).

6. Columns correspond to percent in group that had improvement in A1C control from the first test of more than 0.5% (Better <-0.5%), change remained within 0.5% improvement or worsening (Same -0.5% to 0.5%), or worsened in A1C control by more than 0.5% (Worse >0.5%).

**Table 3: Persistence of blood sugar control among adults with likely diabetes who received medical care, by demographic characteristics, New York City, 2006-2008 through 2012**

Source: New York City A1C Registry, 2006-2012; restricted to NYC residents ages 18 and older at time of entering the registry

Numbers and percents are calculated from the registrants reported to the A1C Registry with likely diabetes who received medical care, defined as having a history of at least two A1C test values  $\geq$  6.5% between 2006 and 2012, and had their first tests in 2006-2008 and their last tests in 2012.

A1C test result statuses are classified based on all tests the A1C Registry collected for each registrant from 2006 to 2012.

	2006-2008 <sup>2</sup>			2006 <sup>2</sup>			2007 <sup>2</sup>			2008 <sup>2</sup>							
	Number	% by A1C test status			Number	% by A1C test status			Number	% by A1C test status			Number	% by A1C test status			
		Total <sup>1</sup>	Always $\geq$ 8%	Ever $\geq$ 8%		Never $\geq$ 8%	Total <sup>1</sup>	Always $\geq$ 8%		Ever $\geq$ 8%	Never $\geq$ 8%	Total <sup>1</sup>		Always $\geq$ 8%	Ever $\geq$ 8%	Never $\geq$ 8%	Total <sup>1</sup>
<b>Overall</b>	132,219	5	60	36	72,508	4	63	33	36,520	5	58	37	23,191	6	53	41	
<b>Age group</b>																	
18-44	12,200	10	69	21	5,559	9	73	18	3,762	10	68	22	2,879	11	64	26	
45-64	67,868	6	63	31	36,445	5	66	29	19,012	6	62	32	12,411	6	57	37	
65+	52,151	2	53	45	30,504	2	57	42	13,746	3	51	47	7,901	3	44	53	
<b>Sex</b>																	
Female	76,869	5	58	38	43,053	4	61	35	20,774	5	56	39	13,042	6	50	45	
Male	54,551	4	63	33	29,053	4	65	31	15,479	5	62	34	10,019	6	58	36	
Unknown	799	7	61	32	402	5	67	28	267	9	59	33	130	10	48	42	
<b>Neighborhood poverty<sup>3</sup></b>																	
Low poverty	22,036	3	53	44	11,796	3	56	42	6,392	3	52	45	3,848	4	49	47	
Medium poverty	47,024	4	58	38	24,771	4	61	36	13,449	5	57	38	8,804	5	51	44	
High Poverty	34,043	5	61	34	19,050	5	64	32	8,950	6	59	35	6,043	7	55	39	
Very high poverty	29,047	6	66	28	16,854	5	69	26	7,711	7	64	29	4,482	8	59	34	
Unknown	69	12	55	33	37	11	62	27	18	6	44	50	14	21	50	29	
<b>Borough</b>																	
Bronx	30,142	5	66	29	18,640	4	69	27	7,284	6	64	31	4,218	6	60	33	
Brooklyn	39,188	5	60	35	20,699	5	63	33	11,169	6	58	36	7,320	7	53	40	
Manhattan	19,045	4	58	37	11,293	4	61	36	4,550	5	57	38	3,202	5	53	42	
Queens	35,163	4	56	40	16,542	3	59	38	11,378	4	57	39	7,243	5	50	46	
Staten Island	8,614	3	55	42	5,297	2	56	41	2,123	4	53	43	1,194	5	51	44	
Unknown	67	12	55	33	37	11	62	27	16	6	44	50	14	21	50	29	

Percentages may not add to 100 due to rounding

1. Includes only those who had at least one test every subsequent year, and who lived in the same zip code between the first and last test.

2. Chi Square tests are significant for all demographic variables ( $p < 0.01$ ).

3. Neighborhood income level are defined as: very high poverty (30% or more residents living at or below Federal Poverty Level [FPL]), high poverty (20 to <30% residents living at or below FPL), medium poverty (10 to <20% residents living at or below FPL), low poverty (0 to <10% residents living at or below FPL).