



Epi Data Tables

New York City Department of Health and Mental Hygiene

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Heat-related Deaths in New York City, 2013

Data Tables

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Data Sources

NYC DOHMH Vital Records: NYC Annual Summary of Vital Statistics, 2000-2012. Heat-related deaths were identified through a review of death certificates to identify those with assigned International Classification of Diseases, 10th Revisions (ICD-10) codes X30 “exposure to excessive natural heat” or T67 “heatstroke and sunstroke” as primary or secondary causes of death from May – September 2013 as of June 2014. Records with a man-made cause of heat exposure (W92) were excluded.

Office of Chief Medical Examiner (OCME) Case Investigation Records: Electronic records for all heat stroke deaths were reviewed to obtain information about the characteristics and circumstances of heat-related deaths, including medical conditions, body mass index (BMI – based on post-mortem height and weight measurements), and information about air conditioning for those exposed at home. Chronic health conditions noted in either the death certificate or OCME records were captured, as well.

DOHMH Population Estimates: Rates were calculated using NYC Dept. of Health and Mental Hygiene population estimates, modified from U.S. Census Bureau intercensal population estimates from 2000-2012 and last updated July 22, 2013.

To access the related Epi Data Brief, go to nyc.gov/html/doh/downloads/pdf/epi/databrief47.pdf



Table 1. Percent of New York City heat-related deaths by characteristic, 2013

Source: NYC Office of Vital Statistics Data, 2013

Characteristic	N	Percent
Socio-demographics		
Age		
0-14	2	8
15-34	4	15
35-64	12	46
65+	8	31
Sex		
Female	9	35
Male	17	65
Race/Ethnicity		
Non-Hispanic white	9	35
Non-Hispanic Black	9	35
Hispanic	5	19
Non-Hispanic Asian	2	8
Other/Missing	1	4
Borough of Residence		
Bronx	2	8
Brooklyn	9	35
Manhattan	4	15
Queens	4	15
Staten Island	3	12
Unknown	4	15
Place of Illness Onset		
Inside Not At Own Residence	2	8
Outside	7	27
Residence	17	65
Days Between Onset and Death		
0	16	62
1	7	27
23	1	4
Unknown	2	8
Place of Death		
In Emergency Department/ Outpatient Facility	9	35
In Hospital	6	23
Residence	9	35
Unknown	1	4
Selected Housing Characteristics for those with illness onset in residence (n=17)		
Fan		
Present and On	6	35
Present, Not On	1	6
Not Present/Unknown	10	59
Air Conditioner		
Not Present	7	41
Present and On	1	6
Present, Not On	1	6
Unknown	8	47

Table 2. Percent of New York City heat-related deaths with underlying chronic health conditions, 2013*Source: NYC Office of Vital Statistics Data, 2013; OCME medical review*

Characteristic	N	Percent
Age	26	100
< 65 years	18	69
65 years and older	8	31
Any chronic condition*		
Cardiovascular	14	58
Obese (BMI = 30 or higher)	6	25
Diabetes	7	29
Substance use, including alcohol (history or at time of illness onset)	9	38
Cognitive or mental health conditions	5	21
Respiratory conditions	1	4

*Among adults ages 18+ (n=24)

Table 3. Percent and rate of New York City heat-related deaths by demographic characteristics, 2000-2012 and 2013

Source: NYC Office of Vital Statistics Data, 2000-2013; NYC DOHMH Population Estimates 2000-2012

Characteristic	2000-2012 (N=162) [†]			2013 (N=26)		
	N	Percent	Average annual rate per million*	N	Percent	Average annual rate per million*
Female age group (years)						
0-14	1	0.6	0.1	1	3.8	1.4
15-34	5	3.1	0.3	1	3.8	0.8
35-64	22	13.6	1.0	4	15.4	2.4
65+	40	24.7	5.2	3	11.5	4.8
Male age group (years)						
0-14	3	1.9	0.3	1	3.8	1.3
15-34	9	5.6	0.6	3	11.5	2.4
35-64	56	34.6	2.9	8	30.8	5.3
65+	26	16.0	5.2	5	19.2	11.9
Neighborhood Poverty Level**						
Low (<10%)	27	16.7	1.2	2	7.7	1.2
Medium (10 to <20%)	53	32.7	1.4	11	42.3	3.7
High (20 to <30%)	38	23.5	1.5	4	15.4	2.0
Very High (30%+)	37	22.8	1.8	4	15.4	2.6
Unknown	7	4.3	N/A	5	19.2	N/A
Race/Ethnicity						
Non-Hispanic white	59	36.4	1.6	9	34.6	2.9
Non-Hispanic Black	80	49.4	3.2	9	34.6	4.7
Hispanic	16	9.9	0.5	5	19.2	2.1
Non-Hispanic Asian	4	2.5	0.3	2	7.7	1.8
Other/Missing	3	1.9	N/A	1	3.8	N/A

*2000-2012 average annual rates calculated using 2000-2012 population estimates produced by the NYC DOHMH; 2013 rates based on 2012 population estimates. Rates are not age-adjusted.

**Neighborhood poverty is based on ZIP code and is defined as the percent of residents in each ZIP code area with incomes below 100% of the Federal Poverty Level per American Community Survey 2007-2011. Rates based on 2010 census data.

[†]Includes deaths occurring between May and September defined as those with International Classification of Diseases, 10th Revisions (ICD-10) codes X30 "exposure to excessive natural heat" or T67 "heatstroke and sunstroke" listed as primary or secondary causes of death among NYC residents are those with unknown residence who died in NYC. Records with a man-made cause of heat exposure (W92) were excluded. The 2013 deaths include three non-NYC residents who died in NYC.