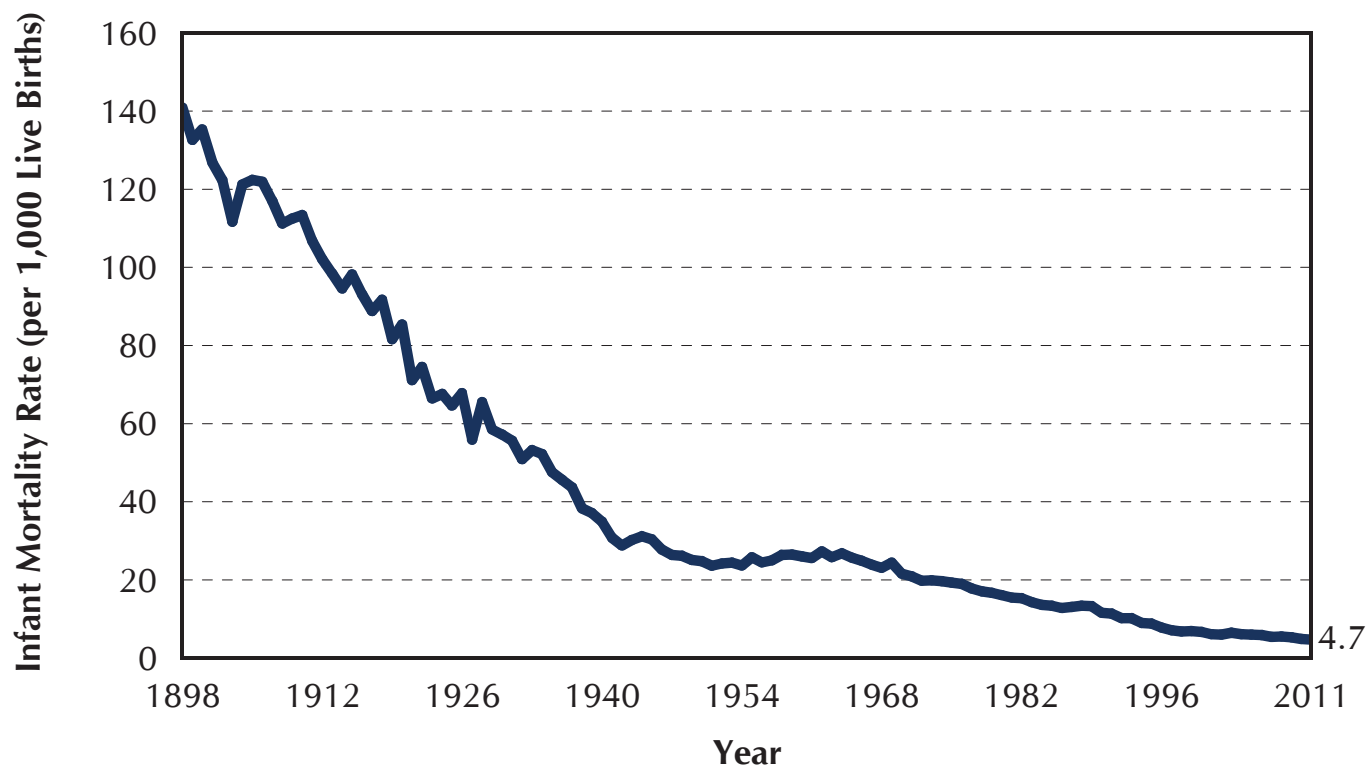


SUMMARY OF VITAL STATISTICS 2011 THE CITY OF NEW YORK

INFANT MORTALITY



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SUMMARY OF VITAL STATISTICS 2011 THE CITY OF NEW YORK INFANT MORTALITY

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INFANT MORTALITY OVERVIEW

Infant mortality is a key indicator of a population's overall health and is defined as the number of infant deaths occurring within the first year of life per 1,000 live births. To characterize infant mortality in New York City, the Bureau of Vital Statistics links the mother's demographic data from the child's birth certificate to data from the death certificate and confidential medical report of death. For technical notes, copies of certificates, and additional data tables, please see the Bureau of Vital Statistics website at www.nyc.gov/vitalstats.

Select Key Findings:

- The infant mortality rate continues to decline, down 4% from 4.9 infant deaths per 1,000 live births in 2010 to 4.7 infant deaths per 1,000 live births in 2011. Both the Take Care New York goal of a citywide infant mortality rate of 5.0 by 2012 and the Healthy People 2020 goal of 6.0 have already been met.
- The leading causes of infant deaths continue to be congenital malformations (20%) and short gestation/low birthweight (20%). External causes, which include injuries, homicides and deaths of undetermined intent, also contribute substantially to these deaths (11%).
- Racial/ethnic disparities in infant mortality rates persist, but infant mortality rates declined among nearly all racial/ethnic groups from 2002 to 2011: 24% for infants born to non-Hispanic whites, 20% for infants born to non-Hispanic blacks, 13% for infants born to Puerto Ricans, and 16% for infants born to other Hispanics. The infant mortality rate for infants born to Asian and Pacific Islanders has fluctuated from a low of 2.5 in 2002 to a high of 4.1 in 2004.
- From 2002 to 2011, infant mortality rates have decreased for infants whose mothers resided in Brooklyn (41%), the Bronx (20%), Staten Island (13%), and Manhattan (5%). For infants born to mothers who lived in Queens, the mortality rate has fluctuated from a high of 5.5 in 2003 to a low of 4.3 in 2010.

Figure 1. Infant Mortality Rate, New York City, 1898–2011

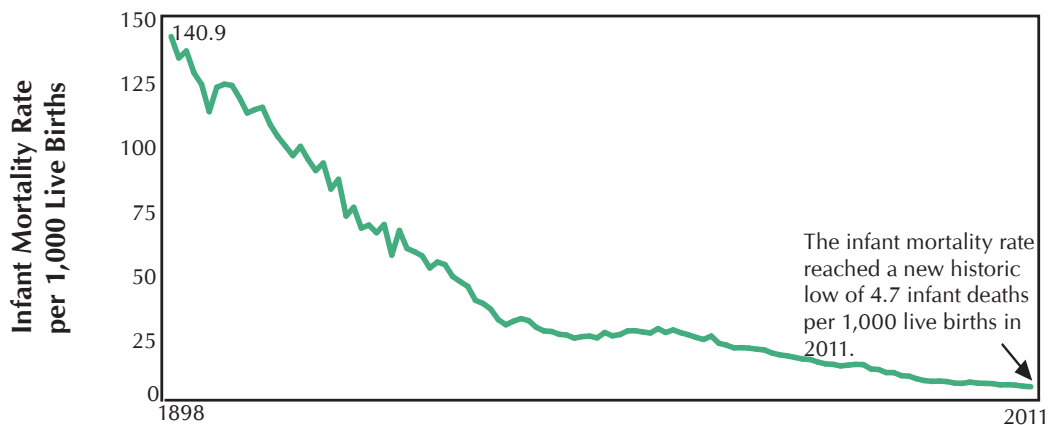
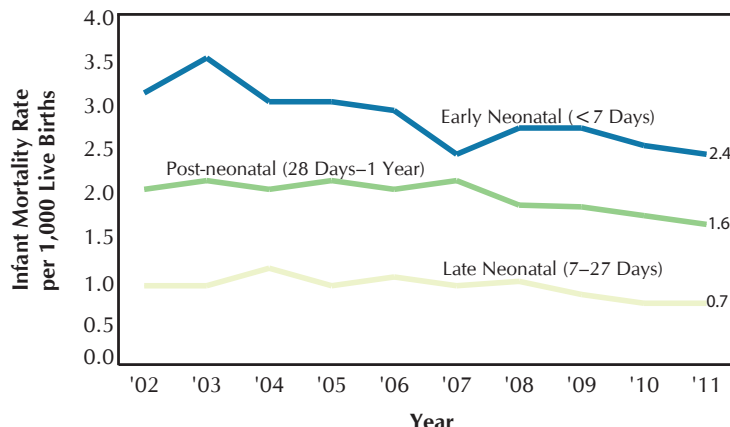


Figure 2. Neonatal and Post-neonatal Mortality Rates, New York City, 2002–2011



- In 2011, the highest rate of infant death occurred during the early neonatal period (age less than 7 days) at 2.4 deaths per 1,000 live births, followed by the post-neonatal period (age 28 days to 1 year) at 1.6 deaths per 1,000 live births.
- From 2002 to 2011, the early and late neonatal mortality rates and the post-neonatal mortality rate had similar relative percentage decreases: 23%, 20%, and 20%, respectively.

Table 1. Infant Deaths by Cause, Sex, and Age, New York City, 2011

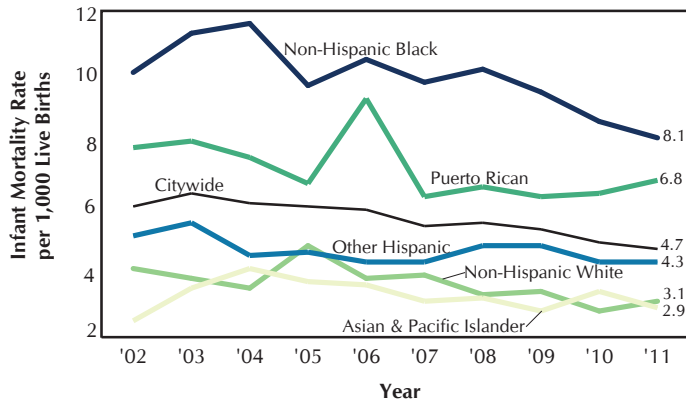
Cause of Death	Total	Male		Female	
		Neonatal (<28 Days)	Post-neonatal (≥ 28 Days)	Neonatal (<28 Days)	Post-neonatal (≥ 28 Days)
Total	577	190	120	188	79
1 Diseases of the Circulatory System (I00-I99)†	12	2	6	1	3
2 Influenza and Pneumonia (J10-J18)†	5	-	4	-	1
3 Newborn Affected by Maternal Complications of Pregnancy (P01)†	12	7	-	5	-
4 Newborn Affected by Complications of Placenta, Cord, and Membranes (P02)†	11	8	-	3	-
5 Short Gestation and Low Birthweight (P07)†	114	52	3	56	3
6 Intrauterine Hypoxia and Birth Asphyxia (P20-P21)†	1	-	-	1	-
7 Respiratory Distress of Newborn (P22)†	17	9	-	8	-
8 Pulmonary Hemorrhage Originating in the Perinatal Period (P26)†	9	5	-	4	-
9 Atelectasis (P28.0-P28.1)†	5	3	-	2	-
10 Other Respiratory Conditions Originating in the Perinatal Period (P23-P28)‡	12	6	2	3	1
11 Cardiovascular Disorders Originating in the Perinatal Period (P29)‡	70	33	-	36	1
12 Infections Specific to the Perinatal Period (P35-P39)‡	18	9	1	8	-
Bacterial sepsis of newborn (P36)	13	7	-	6	-
13 Neonatal Hemorrhage (P50-P52, P54)†	5	2	1	2	-
14 Necrotizing Enterocolitis of Newborn (P77)†	10	4	-	5	1
15 Remainder of Conditions Originating in the Perinatal Period (Rest of P00-P99)	24	10	3	11	-
16 Congenital Malformations, Deformations (Q00-Q99)†	116	28	32	35	21
Congenital malformations of heart (Q20-Q24)	51	13	15	13	10
17 Sudden Infant Death Syndrome (R95)†	5	-	3	-	2
18 All Other Diseases (Rest of A00-R99)	69	4	34	4	27
19 External Causes (V01-Y89)‡	62	8	31	4	19

† Eligible to be ranked as leading causes nationally and in New York City.

‡ Contains causes not eligible to be ranked as a leading cause nationally but frequent in New York City. Including these groups permits recognition of important causes of infant death.

- The leading causes of infant death are congenital malformations (20%) and short gestation/low birthweight (20%).
- External causes of death account for 11% of infant deaths. External causes of death include injury, homicide, and deaths of undetermined intent.
- The majority of neonatal (<28 days) deaths are due to short gestation and low birthweight (29%), followed by cardiovascular disorders (18%), and congenital malformations (17%). In comparison, most post-neonatal deaths are attributable to congenital malformations (27%) and external causes (25%).

Figure 3. Infant Mortality Rate by Mother's Racial/Ethnic Group, New York City, 2002–2011



- Infants born to non-Hispanic blacks and Puerto Ricans continue to have mortality rates higher than the citywide average, at 8.1 and 6.8, respectively.
- From 2002 to 2011, mortality rates decreased for infants born to non-Hispanic whites (24%), non-Hispanic blacks (20%), Puerto Ricans (13%), and other Hispanics (16%).
- The infant mortality rate for infants born to Asian and Pacific Islanders has fluctuated from a low of 2.5 in 2002 to a high of 4.1 in 2004.

- In 2011, the less than 2% of infants born very and extremely premature continued to be at high risk for death; the infant mortality rates were 346 and 39 deaths per 1,000 live births, respectively, for these groups.
- The infant mortality rate for extremely preterm infants has declined 12% over the last 10 years, contributing to the overall reduction in the infant mortality rate.
- Preterm births account for nearly 8% of births, and risk for death among these infants is lower than among very preterm and extremely preterm births: 7 deaths per 1,000 live births in 2011.

Figure 4. Infant Mortality Rate among Preterm Live Births, New York City, 2002–2011

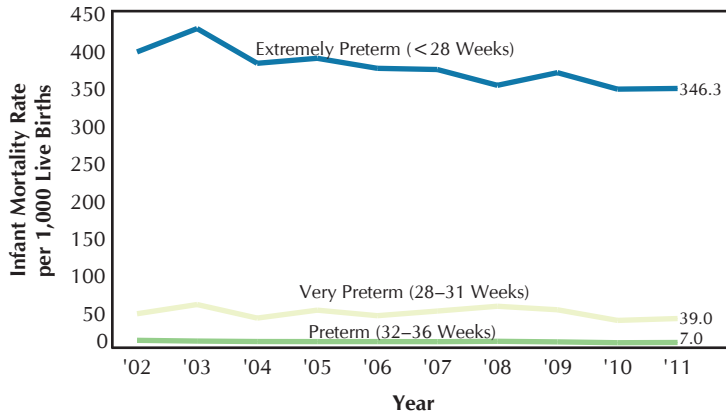
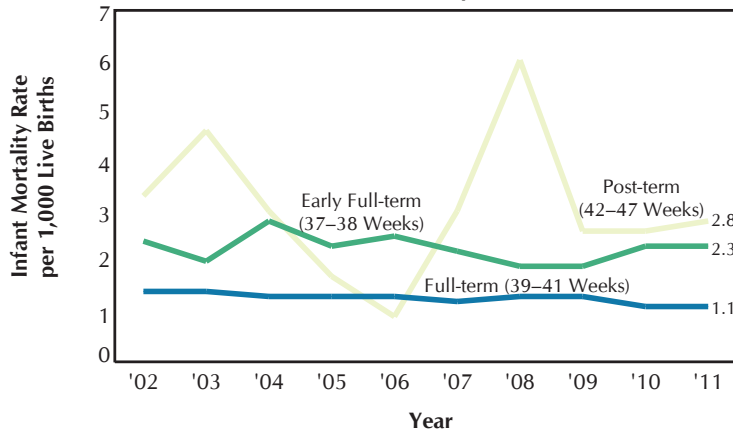


Figure 5. Infant Mortality Rate among Full-term Live Births, New York City, 2002–2011



- In 2011, full-term and post-term births (37–47 weeks) account for nearly 90% of New York City live births, and these infants' mortality rate was low at 1.4 deaths per 1,000 live births (Table 3).
- The infant mortality rate for early full-term births was higher, at 2.3, than for full-term births, at 1.1.
- The infant mortality rate was even higher for post-term births in 2011, at 2.8, but has varied substantially over the past 10 years due to the small numbers of births and deaths at this gestational age.

Table 2. Live Births and Infant Deaths by Mother's Racial/Ethnic Group and Characteristics of Infant, New York City, 2011

Characteristics	Live Births										Infant Deaths														
	Total					Early-neonatal					Neonatal					Post-neonatal									
	Total	Hispanic	Non-H White	Non-H Black	Asian & P.I.	Total	Hispanic	Non-H White	Non-H Black	Asian & P.I.	Total	Hispanic	Non-H White	Non-H Black	Asian & P.I.	Total	Hispanic	Non-H White	Non-H Black	Asian & P.I.					
Total	123,029	37,631	38,573	25,825	19,399	577	185	118	210	57	293	94	62	108	24	378	121	82	136	34	199	64	36	74	23
Sex of Child																									
Male	62,809	18,924	20,050	13,023	10,000	310	95	61	115	36	148	45	31	54	17	190	54	43	67	25	120	41	18	48	11
Female	60,220	18,707	18,523	12,802	9,399	267	90	57	95	21	145	49	31	54	7	188	67	39	69	9	79	23	18	26	12
Birthweight at Delivery (Grams)																									
Low birthweight (<2,500)	10,598	2,910	2,687	3,252	1,595	396	124	72	160	35	252	78	50	100	20	299	96	60	114	25	97	28	12	46	10
Very low birthweight (<1,500)	1,908	542	377	756	202	325	102	58	135	27	220	69	43	90	16	260	85	51	103	19	65	17	7	32	8
2,500-4,000	104,632	32,137	32,922	21,338	17,005	141	52	31	40	16	34	14	11	5	3	63	21	17	16	8	78	31	14	24	8
Above 4,000	7,793	2,584	2,964	1,335	799	9	4	2	1	2	2	1	1	1	-	3	1	1	1	-	6	3	1	-	2
Not stated	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Unmatched†	-	-	-	-	-	31	5	13	9	4	5	1	1	2	1	13	3	4	5	1	18	2	9	4	3
Gestational Age (Weeks)																									
Preterm (<37)	11,420	3,424	2,946	3,382	1,506	389	125	74	153	33	251	79	53	98	18	298	98	63	111	23	91	27	11	42	10
Very preterm (<32)	1,978	574	401	772	194	323	97	61	135	26	223	67	47	91	15	259	81	54	103	18	64	16	7	32	8
Full-term	111,595	34,205	35,626	22,441	17,892	155	55	30	48	19	35	14	7	8	4	65	20	14	20	9	90	35	16	28	10
Not stated	14	2	1	2	1	2	1	1	1	1	2	1	1	1	1	2	1	1	1	1	1	1	1	1	1
Unmatched†	-	-	-	-	-	31	5	13	9	4	5	1	1	2	1	13	3	4	5	1	18	2	9	4	3
Plurality																									
Singletons	118,232	36,592	36,512	24,798	18,805	452	162	71	167	46	227	84	34	87	18	290	104	46	109	27	162	58	25	58	19
Multiples	4,796	1,039	2,061	1,027	594	94	18	34	34	7	61	9	27	19	5	75	14	32	22	6	19	4	2	12	1
Unmatched†	-	-	-	-	-	31	5	13	9	4	5	1	1	2	1	13	3	4	5	1	18	2	9	4	3
Plurality unknown	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

† Infants who died in New York City who were born elsewhere are classified as unmatched.

Table 3. Infant Mortality Rate by Mother's Racial/Ethnic Group and Characteristics of Infant, New York City, 2011

Characteristics	Total										Neonatal										Post-neonatal									
	Total					Early-neonatal					Neonatal					Post-neonatal					Non-H Black					Asian & P.I.				
	Total	Hispanic	Non-H White	Non-H Black	Asian & P.I.	Total	Hispanic	Non-H White	Non-H Black	Asian & P.I.	Total	Hispanic	Non-H White	Non-H Black	Asian & P.I.	Total	Hispanic	Non-H White	Non-H Black	Asian & P.I.	Total	Hispanic	Non-H White	Non-H Black	Asian & P.I.					
Sex of Child	4.7	4.9	3.1	8.1	2.9	2.4	2.5	1.6	4.2	1.2	3.1	3.2	2.1	5.3	1.8	1.6	1.7	0.9	2.9	1.2	1.6	1.7	0.9	2.9	1.2					
Male	4.9	5.0	3.0	8.8	3.6	2.4	2.4	1.5	4.1	1.7	3.0	2.9	2.1	5.1	2.5	1.9	2.2	0.9	3.7	1.1	1.9	2.2	0.9	3.7	1.1					
Female	4.4	4.8	3.1	7.4	2.2	2.4	2.6	1.7	4.2	0.7	3.1	3.6	2.1	5.4	1.0	1.3	1.2	1.0	2.0	1.3	1.3	1.2	1.0	2.0	1.3					
Birthweight at Delivery (Grams)																														
Low birthweight (<2,500)	37.4	42.6	26.8	49.2	21.9	23.8	26.8	18.6	30.8	12.5	28.2	33.0	22.3	35.1	15.7	9.2	9.6	4.5	14.1	6.3	9.2	9.6	4.5	14.1	6.3					
Very low birthweight (<1,500)	170.3	188.2	153.8	178.6	133.7	115.3	127.3	114.1	119.0	79.2	136.3	156.8	135.3	136.2	94.1	34.1	31.4	18.6	42.3	39.6	34.1	31.4	18.6	42.3	39.6					
2,500-4,000	1.3	1.6	0.9	1.9	0.9	0.3	0.4	0.3	0.2	0.2	0.6	0.7	0.5	0.8	0.5	0.7	1.0	0.4	1.1	0.5	0.7	1.0	0.4	1.1	0.5					
Above 4,000	1.2	1.5	0.7	0.7	2.5	0.3	0.4	-	0.7	-	0.4	0.4	0.3	0.7	-	0.8	1.2	0.3	-	2.5	0.8	1.2	0.3	-	2.5					
Gestational Age (Weeks)																														
Preterm (<37)	34.1	36.5	25.1	45.2	21.9	22.0	23.1	18.0	29.0	12.0	26.1	28.6	21.4	32.8	15.3	8.0	7.9	3.7	12.4	6.6	8.0	7.9	3.7	12.4	6.6					
Very preterm (<32)	163.3	169.0	152.1	174.9	134.0	112.7	116.7	117.2	117.9	77.3	130.9	141.1	134.7	133.4	92.8	32.4	27.9	17.5	41.5	41.2	32.4	27.9	17.5	41.5	41.2					
Full-term	1.4	1.6	0.8	2.1	1.1	0.3	0.4	0.2	0.4	0.2	0.6	0.6	0.4	0.9	0.5	0.8	1.0	0.4	1.2	0.6	0.8	1.0	0.4	1.2	0.6					
Plurality																														
Singletons	3.8	4.4	1.9	6.7	2.4	1.9	2.3	0.9	3.5	1.0	2.5	2.8	1.3	4.4	1.4	1.4	1.6	0.7	2.3	1.0	1.4	1.6	0.7	2.3	1.0					
Multiples	19.6	17.3	16.5	33.1	11.8	12.7	8.7	13.1	18.5	8.4	15.6	13.5	15.5	21.4	10.1	4.0	3.8	1.0	11.7	1.7	4.0	3.8	1.0	11.7	1.7					

Note: Categories for gestational age in Table 2 and Table 3 differ from those in Figure 4. Different categories are used in Table 2 and Table 3 due to the small number of events.

Table 4. Live Births and Infant Mortality, Overall and by Mother's Racial/Ethnic Group, New York City, 2007–2011

Mother's Ethnic Group	2007	2008	2009	2010	2011
Live Births, Total	128,961	127,680	126,774	124,791	123,029
Puerto Rican	10,229	10,351	9,958	9,581	8,988
Other Hispanic	30,483	30,029	30,328	29,764	28,643
Asian and Pacific Islander	19,291	18,204	17,729	18,047	19,399
Non-Hispanic White	39,351	38,383	38,438	37,780	38,573
Non-Hispanic Black	29,268	27,917	27,405	26,635	25,825
Other or Unknown	339	2,796	2,916	2,984	1,601
Infant Deaths (< 1 year), Total	697	698	668	609	577
Puerto Rican	64	68	63	61	61
Other Hispanic	130	143	147	129	124
Asian and Pacific Islander	59	59	50	62	57
Non-Hispanic White	155	125	131	104	118
Non-Hispanic Black	287	284	259	230	210
Other or Unknown	2	19	18	23	7
Infant Mortality Rate, Total	5.4	5.5	5.3	4.9	4.7
Puerto Rican	6.3	6.6	6.3	6.4	6.8
Other Hispanic	4.3	4.8	4.8	4.3	4.3
Asian and Pacific Islander	3.1	3.2	2.8	3.4	2.9
Non-Hispanic White	3.9	3.3	3.4	2.8	3.1
Non-Hispanic Black	9.8	10.2	9.5	8.6	8.1
Neonatal Deaths (< 28 days), Total	430	466	444	403	378
Puerto Rican	37	43	44	43	42
Other Hispanic	82	99	97	81	79
Asian and Pacific Islander	39	44	36	41	34
Non-Hispanic White	93	82	97	75	82
Non-Hispanic Black	177	182	158	148	136
Neonatal Mortality Rate, Total	3.3	3.6	3.5	3.2	3.1
Puerto Rican	3.6	4.2	4.4	4.5	4.7
Other Hispanic	2.7	3.3	3.2	2.7	2.8
Asian and Pacific Islander	2.0	2.4	2.0	2.3	1.8
Non-Hispanic White	2.4	2.1	2.5	2.0	2.1
Non-Hispanic Black	6.0	6.5	5.8	5.6	5.3

Table 5. Infant Mortality Rate by Mother's Birthplace, New York City, 2007–2011

Birthplace	2007	2008	2009	2010	2011
Total, New York City	5.4	5.5	5.3	4.9	4.7
Yemen Arab Republic	†	2.0	†	6.3	9.9
Puerto Rico ‡	6.6	6.9	7.3	9.5	8.8
Nigeria	3.5	5.2	11.6	4.8	8.2
Pakistan	6.8	7.1	4.7	4.5	7.7
Guyana	7.5	10.7	4.2	8.0	7.6
Honduras	1.1	4.6	7.0	8.9	6.4
Guatemala	5.4	5.1	3.2	9.9	6.2
Jamaica	5.1	7.2	5.1	6.3	5.4
United States ‡	6.2	6.1	6.5	5.3	5.4
Colombia	0.0	1.0	3.5	0.0	4.9
Haiti	5.3	8.0	3.9	6.4	4.5
Bangladesh	4.2	1.8	5.7	4.0	4.1
El Salvador	3.8	2.5	2.5	3.7	4.1
Mexico	3.5	5.0	2.9	3.5	3.7
Ecuador	5.2	3.0	1.7	4.5	3.4
Dominican Republic	3.4	3.8	5.4	3.6	3.2
Canada	0.0	3.5	3.2	0.0	3.0
Ghana	10.0	4.4	4.1	5.8	3.0
Trinidad and Tobago	4.8	7.7	1.3	6.3	2.9
India	3.1	2.3	1.9	2.6	2.6
Philippines	2.4	1.3	1.2	6.7	2.5
Uzbekistan	†	†	0.0	1.7	2.5
China	1.6	2.2	2.1	2.6	1.8
Ukraine	3.8	3.8	1.3	1.2	1.3
Poland	2.0	4.1	1.0	0.0	1.2
Russia	0.0	1.1	4.1	3.1	1.1
Korea	2.6	1.0	0.0	1.1	1.1
Egypt	†	†	†	2.0	0.0
Israel	2.4	0.0	1.7	0.0	0.0
United Kingdom	1.6	3.4	0.0	3.5	0.0
Peru	5.5	†	3.8	†	†

† Live births were < 500 in that year. The infant mortality rate is listed for only countries with 500 or more live births each year.

‡ As of 2006, US Virgin Islands and Guam are included in the United States. Puerto Rico is a US territory, but is not included as a birthplace in the United States due to the large number of births to Puerto Rican-born women.

- From 2002 to 2011, infant mortality rates have decreased for infants whose mothers resided in Brooklyn (41%), the Bronx (20%), Staten Island (13%) and Manhattan (5%). The variability in Staten Island's infant mortality rate is likely due to the relatively small numbers of births and infant deaths in that borough due to its smaller population.
- For infants born to mothers who lived in Queens, the mortality rate has fluctuated from a high of 5.5 in 2003 to a low of 4.3 in 2010.

Figure 6. Infant Mortality Rate by Borough of Residence, New York City, 2002–2011

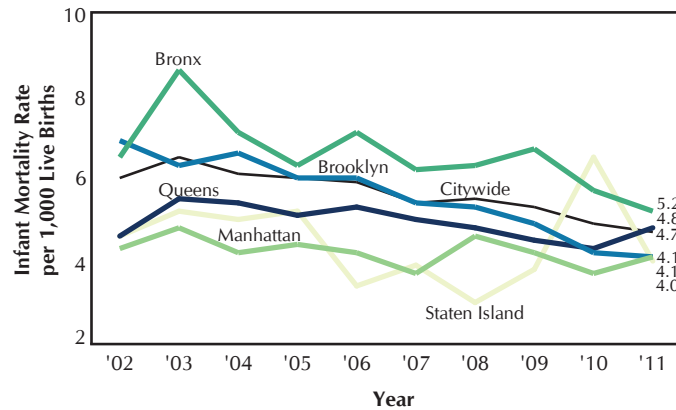
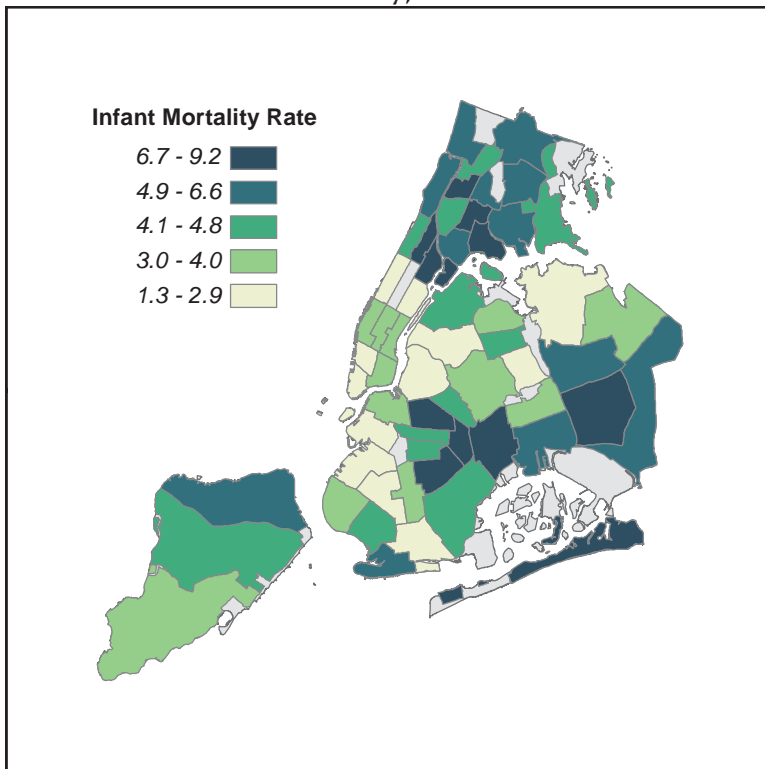


Figure 7. Infant Mortality Rate (Three-year Averages) by Community District of Residence, New York City, 2009–2011



- The five community districts with the highest infant mortality rates 2009–2011 were Brownsville (9.2), Central Harlem (8.5), East New York (8.4), Jamaica/St. Albans (8.4), and Morrisania (7.7).
- The five community districts with the lowest infant mortality rates included Upper West Side (1.3), Battery Park/Tribeca (1.6), Park Slope (1.9), Sheepshead Bay (2.1), and Rego Park/Forest Hills (2.3).

Table 6. Infant and Neonatal Mortality Rates by Community District of Residence, New York City, 2007–2011

Community District		2007–2009*		2008–2010*		2009–2011*	
		Infant Mortality Rate	Neonatal Mortality Rate	Infant Mortality Rate	Neonatal Mortality Rate	Infant Mortality Rate	Neonatal Mortality Rate
	NEW YORK CITY	5.4	3.5	5.2	3.5	4.9	3.3
	MANHATTAN	4.2	2.8	4.1	2.8	3.9	2.6
101	Battery Park, Tribeca	2.2	1.9	1.4	1.0	1.6	1.3
102	Greenwich Village, SOHO	4.1	3.3	3.1	2.7	2.4	2.4
103	Lower East Side	3.7	2.1	4.4	2.3	3.4	1.1
104	Chelsea, Clinton	2.9	2.2	3.2	2.5	3.3	2.5
105	Midtown Business District	4.9	3.0	5.3	3.6	4.0	2.3
106	Murray Hill	2.8	2.5	3.1	3.1	3.9	3.1
107	Upper West Side	2.5	1.6	2.0	1.3	1.3	0.7
108	Upper East Side	2.5	1.8	2.7	1.9	2.5	1.9
109	Manhattanville	7.0	4.7	5.7	4.3	4.7	3.2
110	Central Harlem	7.9	4.6	7.5	4.6	8.5	6.2
111	East Harlem	7.6	4.6	6.6	4.1	6.9	4.5
112	Washington Heights	3.5	2.7	4.7	3.1	4.9	2.6
	BRONX	6.4	4.2	6.3	4.3	5.9	3.9
201	Mott Haven	7.6	5.0	7.1	4.6	6.3	4.1
202	Hunts Point	5.5	3.8	6.4	4.1	7.6	4.5
203	Morrisania	7.0	4.0	7.8	5.0	7.7	4.8
204	Concourse, Highbridge	6.2	4.0	5.7	3.7	4.8	3.3
205	University/Morris Heights	6.4	3.9	7.5	5.1	7.3	4.9
206	East Tremont	6.5	3.8	7.4	5.2	6.6	3.6
207	Fordham	6.7	5.3	5.5	4.4	4.6	3.6
208	Riverdale	5.3	3.3	5.2	4.3	5.3	4.5
209	Unionport, Soundview	5.0	3.7	4.9	3.2	5.4	3.3
210	Throgs Neck	5.7	4.1	4.9	3.6	4.6	3.0
211	Pelham Parkway	7.1	6.2	6.3	5.4	6.3	5.1
212	Williamsbridge	7.2	3.6	7.0	3.9	6.0	3.4
	BROOKLYN	5.2	3.3	4.8	3.1	4.4	2.8
301	Williamsburg, Greenpoint	3.0	2.0	2.5	1.8	2.4	1.5
302	Fort Greene, Brooklyn Heights	3.5	1.7	4.8	2.7	3.5	2.6
303	Bedford Stuyvesant	8.7	5.2	8.5	5.3	7.0	4.0
304	Bushwick	5.8	4.1	5.0	3.8	4.4	3.2
305	East New York	9.5	5.3	8.7	4.6	8.4	4.5
306	Park Slope	4.7	3.6	3.3	1.9	1.9	0.9
307	Sunset Park	2.6	1.7	3.1	2.0	2.9	2.0
308	Crown Heights North	4.9	3.8	5.8	4.2	4.2	3.1
309	Crown Heights South	5.5	3.9	5.1	3.2	4.4	2.6
310	Bay Ridge	3.8	2.3	4.0	2.7	4.0	2.5
311	Bensonhurst	3.2	2.6	3.7	2.9	4.2	3.1
312	Borough Park	3.6	2.1	2.7	1.7	2.8	2.0
313	Coney Island	5.0	3.6	4.9	3.0	5.6	3.6
314	Flatbush, Midwood	4.9	2.6	4.3	2.2	3.8	2.3
315	Sheepshead Bay	4.3	3.3	3.1	2.0	2.1	1.3
316	Brownsville	11.3	6.3	9.9	6.5	9.2	5.6
317	East Flatbush	6.2	4.0	6.4	4.4	6.8	4.6
318	Canarsie	6.3	4.1	5.3	3.2	4.8	3.2
	QUEENS	4.7	3.1	4.5	2.9	4.5	2.9
401	Astoria, Long Island City	4.5	3.7	5.3	3.8	4.3	2.5
402	Sunnyside, Woodside	3.3	2.6	2.8	2.2	2.4	1.9
403	Jackson Heights	3.6	2.4	3.6	2.2	3.2	1.7
404	Elmhurst, Corona	3.2	2.2	3.7	2.4	4.1	2.9
405	Ridgewood, Glendale	3.2	2.3	3.0	2.0	3.7	2.4
406	Rego Park, Forest Hills	2.1	1.1	2.1	1.3	2.3	2.1
407	Flushing	2.9	1.7	2.8	1.9	2.7	1.5
408	Fresh Meadows, Briarwood	7.4	5.2	6.1	3.8	5.1	3.0
409	Woodhaven	4.3	2.0	4.1	1.7	3.5	1.2
410	Howard Beach	5.2	3.2	4.8	2.8	4.9	2.7
411	Bayside	3.8	2.4	2.5	2.0	3.0	3.0
412	Jamaica, St. Albans	8.4	5.6	7.3	4.3	8.4	5.2
413	Queens Village	6.7	3.7	5.9	4.0	6.4	4.9
414	The Rockaways	6.2	3.7	7.5	4.9	7.2	4.8
	STATEN ISLAND	3.5	2.0	4.4	3.5	4.8	3.6
501	Port Richmond	5.0	3.0	5.9	4.5	5.5	3.9
502	Willowbrook, South Beach	1.8	0.7	3.0	2.5	4.5	3.8
503	Tottenville	2.6	1.6	3.1	2.5	3.6	2.7

* Due to instability of the infant mortality rate by community district, the infant mortality rate is presented in rolling three-year averages.

Figure 6 provides single-year infant mortality rate by borough.

- From 2002 to 2011, infant mortality rates decreased for infants born to women aged 40 and older (43%), 30–39 (31%), and 20–29 (10%).
- In 2011, the infant mortality rate was the highest among infants born to the youngest mothers (<20 years of age) at 8.8 infant deaths per 1,000 live births.

Figure 8. Infant Mortality Rate by Age of Mother, New York City, 2002–2011

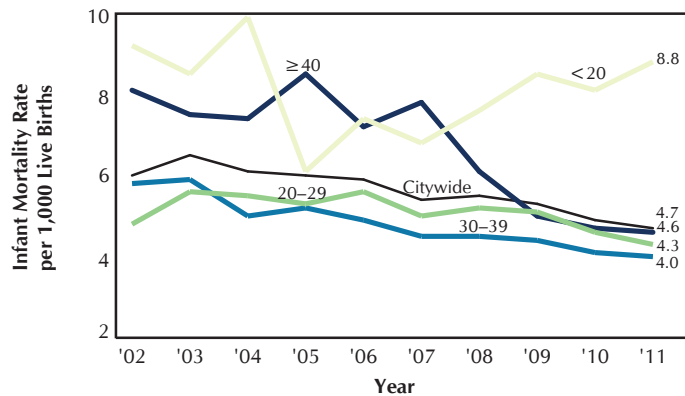
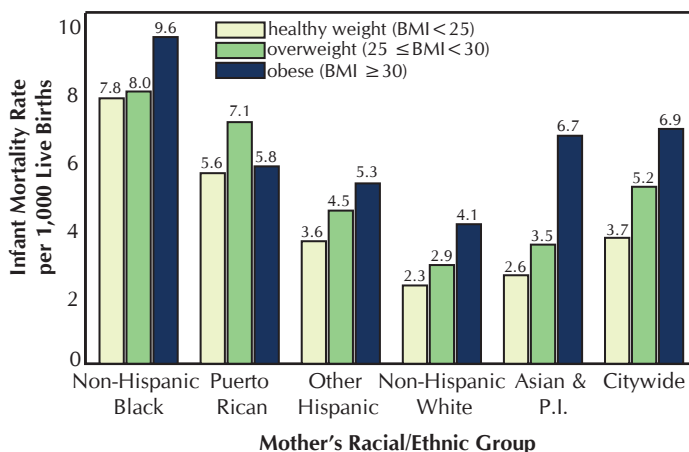


Figure 9. Infant Mortality Rate (Three-year Averages) by Pre-pregnancy Body Mass Index (BMI) and Mother’s Racial/Ethnic Group, New York City, 2009–2011



- Citywide, during 2009–2011, the risk of death for infants born to obese mothers was 1.8 times higher than for infants of healthy weight mothers (3.7 vs. 6.9 per 1,000 live births).
- The infant mortality rate was higher for infants born to overweight and obese mothers compared to those born to healthy weight mothers across all racial ethnic groups.

Table 7. Live Births and Infant Mortality Rate by Characteristics of Mother, New York City, 2011

Characteristics	Live Births		Infant Mortality Rate (IMR) per 1,000 Live Births					
			All		Neonatal		Post-neonatal	
	Number	Percent	Deaths	Rate	Deaths	Rate	Deaths	Rate
Total	123,029	100.0	577	4.7	378	3.1	199	1.6
Race/Ethnicity								
Puerto Rican	8,988	7.3	61	6.8	42	4.7	19	2.1
Other Hispanic	28,643	23.3	124	4.3	79	2.8	45	1.6
Asian and Pacific Islander	19,399	15.8	57	2.9	34	1.8	23	1.2
Non-Hispanic White	38,573	31.4	118	3.1	82	2.1	36	0.9
Non-Hispanic Black	25,825	21.0	210	8.1	136	5.3	74	2.9
Other and unknown	1,601	1.3	7	-	5	-	2	-
Age of Mother								
Age < 18	1,993	1.6	26	13.0	18	9.0	8	4.0
Age 18-19	4,496	3.7	31	6.9	19	4.2	12	2.7
Age 20-29	54,409	44.2	234	4.3	150	2.8	84	1.5
Age 30-39	55,831	45.4	226	4.0	160	2.9	66	1.2
Age ≥ 40	6,299	5.1	29	4.6	18	2.9	11	1.7
Age unknown	1	0.0	-	-	-	-	-	-
Unmatched*	-	-	31	-	13	-	18	-
Mother's Education								
11th grade or less/12th grade, no diploma	27,708	22.5	164	5.9	103	3.7	61	2.2
High school graduate or GED	27,117	22.0	134	4.9	83	3.1	51	1.9
Some college/associate degree	26,939	21.9	117	4.3	85	3.2	32	1.2
Bachelor's degree	22,816	18.5	75	3.3	54	2.4	21	0.9
Master's degree or higher	18,046	14.7	46	2.5	32	1.8	14	0.8
Mother's education unknown	403	0.3	10	-	8	-	2	-
Unmatched*	-	-	31	-	13	-	18	-
Marital Status of Mother#								
Not married	52,030	42.3	349	6.7	221	4.2	128	2.5
Married	70,999	57.7	197	2.8	144	2.0	53	0.7
Unmatched*	-	-	31	-	13	-	18	-
Mother's Birthplace								
US born, including territories	60,498	49.2	332	5.5	231	3.8	101	1.7
Foreign born	62,511	50.8	214	3.4	134	2.1	80	1.3
Birthplace unknown	20	0.0	-	-	-	-	-	-
Unmatched*	-	-	31	-	13	-	18	-
Primary Payer for This Birth								
Medicaid/Family Plus/Child PlusB/other govt	73,122	59.4	339	4.6	215	2.9	124	1.7
Other	49,259	40.0	198	4.0	143	2.9	55	1.1
Coverage unknown	648	0.5	9	-	7	-	2	-
Plurality								
Singletons	119,822	96.0	484	4.0	315	2.6	169	1.4
Multiples	4,967	4.0	92	18.5	74	14.9	18	3.6
Plurality unknown	2	0.0	-	-	-	-	-	-
Unmatched*	-	-	31	-	13	-	18	-
Parity								
First birth	54,854	44.6	242	4.4	166	3.0	76	1.4
Second birth or higher	68,129	55.4	304	4.5	199	2.9	105	1.5
Unknown	46	0.0	-	-	-	-	-	-
Unmatched*	-	-	31	-	13	-	18	-
First Prenatal Care Visit								
No prenatal care	847	0.7	34	40.1	26	30.7	8	9.4
First trimester (1-3 months)	85,562	69.5	330	3.9	228	2.7	102	1.2
Second trimester (4-6 months)	27,497	22.4	111	4.0	71	2.6	40	1.5
Late (7-9 months)	7,539	6.1	33	4.4	18	2.4	15	2.0
Prenatal care unknown	1,584	1.3	38	-	22	-	16	-
Unmatched*	-	-	31	-	13	-	18	-
Pre-pregnancy Body Mass Index (BMI)								
Underweight (BMI < 18.5)	6,797	5.5	16	2.4	11	1.6	5	0.7
Normal weight (18.5 ≤ BMI < 25)	66,594	54.1	239	3.6	147	2.2	92	1.4
Overweight (25 ≤ BMI < 30)	28,885	23.5	138	4.8	103	3.6	35	1.2
Obese (BMI ≥ 30)	19,855	16.1	134	6.7	93	4.7	41	2.1
Pre-pregnancy BMI unknown	898	0.7	19	-	11	-	8	-
Unmatched*	-	-	31	-	13	-	18	-

* Infants who died in New York City who were born elsewhere were classified as unmatched.

Reporting of mother's marital status on the birth certificate is prohibited by law. Marital status is computed using father's name. When missing or accompanied by an Acknowledgment of Paternity, marital status is categorized as unmarried; all others with father's name are categorized as married.