



Epi Data Tables

New York City Department of Health and Mental Hygiene

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Pandemic H1N1 Influenza Surveillance in New York City

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Data Sources

Active and/or enhanced surveillance for 2009-2010 pandemic H1N1 influenza A was conducted from April 24, 2009 through March 31, 2010.

- Active/enhanced surveillance started on April 24th in response to the initial detection of the 2009 H1N1 influenza A strain in NYC; these surveillance efforts were in place from April 24 – June 19 during the period of peak pandemic activity.
- From June 20th through August 31st, only enhanced passive surveillance was in place.
- Only routine passive surveillance was conducted in September 2009.
- Sentinel hospital-based and routine passive surveillance coincided with the beginning of the CDC-defined 2009-2010 influenza season (October 1, 2009). The end date for detailed surveillance and data-cleaning for the 2009-2010 influenza season was March 31, 2010.

The sources for data presented below include the following:

- **Electronic Clinical Laboratory Reporting System (ECLRS)** reports
 - All laboratory-positive results for influenza for residents of New York City are required to be reported.
- **Hospitalized cases of laboratory-confirmed influenza A reported by providers**
 - Electronic reporting was made available through Reporting Central on July 7, 2009.
- **Hospitalizations and deaths associated with influenza reported to or identified by NYC DOHMH** during active/enhanced surveillance
- Matching of **DOHMH death certificate registry data** with reported cases of influenza in order to identify deaths associated with influenza.
 - Between April 24 and August 31, 2009, deaths that occurred at any time after onset of infection were defined as an influenza-related death. Between October 1, 2009 and March 31, 2010 deaths were only defined as influenza-related if they occurred within 30 days after onset of infection.

When reviewing these data, please keep in mind that most people with influenza are not detected by our current surveillance systems for one of the following reasons: a) they do not seek care, b) they do seek care but are not tested for influenza and are treated symptomatically, or c) they are tested but their test result is falsely negative (currently available rapid tests for influenza are quite insensitive). Even hospitalizations and deaths associated with laboratory confirmed influenza may not be reported to the Health Department. For these reasons, it is important to remember that these data do not represent all cases of influenza in New York City during this time period.

To access the related Epi Data Brief, go to www.nyc.gov/html/doh/downloads/pdf/epi/databrief5.pdf

Table 1. Total Number of Influenza Cases and Related Hospitalizations and Deaths across 3 Surveillance Periods, New York City, April 24, 2009- March 31, 2010**A Guide to Influenza**

- Influenza A and B are the main virus types.
- Influenza A can be further subtyped:
 - **2009 H1N1 influenza** refers to (p)H1N1 influenza.
 - **Seasonal influenza A** (also referred to as (s)Influenza A) refers to other seasonal influenza A strains, including influenza A H3N2 and non-pandemic influenza H1N1.

	April 24 - June 19, 2009*	June 20 - August 31, 2009*	October 1, 2009 - March 31, 2010**
# Laboratory-Confirmed Influenza Cases (# Hospitalized)			
Total Influenza A	1956 (1169)	152 (92)	5086 (802)
2009 H1N1***	1666 (930)	122 (68)	1738 (272)
Seasonal Influenza A, H3	84 (50)	6 (3)	3 (1)
Seasonal Influenza A, H1	3 (1)	1 (1)	0 (0)
Subtype Unknown [†]	203 (188)	23 (20)	3345 (529)
Total Influenza B	3 (1)	0	39 (2)
Positive Influenza, Unknown Type	8 (8)	1 (1)	27 (10)
# Laboratory Confirmed Influenza Deaths[‡]			
Total Influenza A	60	9	55
2009 H1N1	57	9	32
Seasonal Influenza A, H3	1	0	0
Seasonal Influenza A, H1	0	0	0
Subtype Unknown	2	0	23
Total Influenza B	0	0	1
Positive Influenza, Unknown Type	0	1	1

* Dates used to define the start of infection for cases were selected from a hierarchy of available dates: onset date, admission date and diagnosis date.

**The date used for inclusion in this period was based solely on the reported diagnosis date.

***Includes confirmed and probable H1N1.

[†] Includes cases that were influenza A positive but were never subtyped or had an inconclusive subtype test.

[‡] Between April 24 – August 31, 2009, deaths that occurred at any time after onset of infection were defined as an influenza-related death. Between October 1, 2009 and March 31, 2010 deaths were only defined as influenza-related if they occurred within 30 days after onset of infection.

Table 2. Total Number of Cases and Related Hospitalizations by Age across 3 Surveillance Periods, New York City, April 24, 2009- March 31, 2010

	April 24 - June 19, 2009	June 20 - August 31, 2009	October 1, 2009 - March 31, 2010
# Laboratory-Confirmed Influenza Cases (# Hospitalizations)			
Total H1N1	1666 (930)	122 (68)	1738 (272)
0-<2	187 (146)	9 (5)	85 (37)
2-4	113 (77)	7 (5)	158 (19)
5-18	589 (194)	19 (11)	527 (31)
19-24	144 (77)	8 (6)	182 (31)
25-49	366 (232)	49 (18)	555 (85)
50-64	205 (158)	17 (14)	165 (49)
≥65	55 (46)	12 (9)	37 (20)
Missing	7 (0)	1 (0)	29 (0)
Total Other Influenza A[§]	290 (239)	30 (24)	3348 (530)
0-<2	42 (39)	2 (2)	516 (101)
2-4	19 (17)	3 (3)	361 (50)
5-18	77 (62)	7 (5)	833 (78)
19-24	21 (15)	0	343 (46)
25-49	56 (42)	5 (5)	814 (110)
50-64	34 (31)	6 (5)	325 (90)
≥65	41 (33)	7 (4)	136 (55)
Missing	0	0	20 (0)
# Laboratory Confirmed Influenza Deaths			
Total H1N1	57	9	32
0-<2	2	0	1
2-4	0	1	0
5-18	1	0	1
19-24	0	0	2
25-49	28	5	13
50-64	21	1	10
≥65	5	2	5
Missing	0	0	0
Total Other Influenza A[§]	3	0	23
0-<2	0	0	0
2-4	0	0	0
5-18	0	0	0
19-24	0	0	1
25-49	2	0	9
50-64	1	0	6
≥65	0	0	7
Missing	0	0	0

§ Influenza A, seasonal or subtype unknown include specimens that tested positive for influenza A but which were a) unsubtypeable, b) not subtyped, c) inconclusive on subtyping or d) seasonal influenza. Because of the high prevalence of H1N1 circulating during these time periods, the majority of "Other Influenza A" cases are likely H1N1 cases

Table 3. Total Number of Cases and Related Hospitalizations by Borough across 3 Surveillance Periods, New York City, April 24, 2009- March 31, 2010

	April 24 - June 19, 2009	June 20 - August 31, 2009	October 1, 2009 - March 31, 2010
# Laboratory-Confirmed Influenza Cases (# Hospitalizations)			
Total H1N1	1666 (930)	122 (68)	1738 (272)
<i>Bronx</i>	281 (242)	20 (14)	274 (121)
<i>Brooklyn</i>	336 (281)	22 (18)	353 (40)
<i>Manhattan</i>	174 (133)	33 (22)	387 (40)
<i>Queens</i>	824 (230)	33 (10)	421 (39)
<i>Staten Island</i>	51 (44)	9 (4)	266 (32)
<i>NYC Unknown</i>	0	5 (0)	37 (0)
Total Other Influenza A [§]	290 (239)	30 (24)	3348 (530)
<i>Bronx</i>	87 (75)	3 (3)	741 (101)
<i>Brooklyn</i>	62 (57)	7 (6)	647 (120)
<i>Manhattan</i>	43 (36)	8 (6)	644 (158)
<i>Queens</i>	94 (69)	9 (7)	918 (134)
<i>Staten Island</i>	4 (2)	2 (2)	277 (16)
<i>NYC Unknown</i>	0	1 (0)	121 (1)
# Laboratory Confirmed Influenza Deaths			
Total H1N1	57	9	32
<i>Bronx</i>	16	4	9
<i>Brooklyn</i>	16	2	6
<i>Manhattan</i>	10	2	9
<i>Queens</i>	8	1	3
<i>Staten Island</i>	7	0	1
<i>NYC Unknown</i>	0	0	4
Total Other Influenza A [§]	3	0	23
<i>Bronx</i>	3	0	10
<i>Brooklyn</i>	0	0	2
<i>Manhattan</i>	0	0	6
<i>Queens</i>	0	0	3
<i>Staten Island</i>	0	0	1
<i>NYC Unknown</i>	0	0	1

§ Influenza A, seasonal or subtype unknown include specimens that tested positive for influenza A but which were a) unsubtypeable, b) not subtyped, c) inconclusive on subtyping or d) seasonal influenza. Because of the high prevalence of H1N1 circulating during these time periods, the majority of "Other Influenza A" cases are likely H1N1 cases