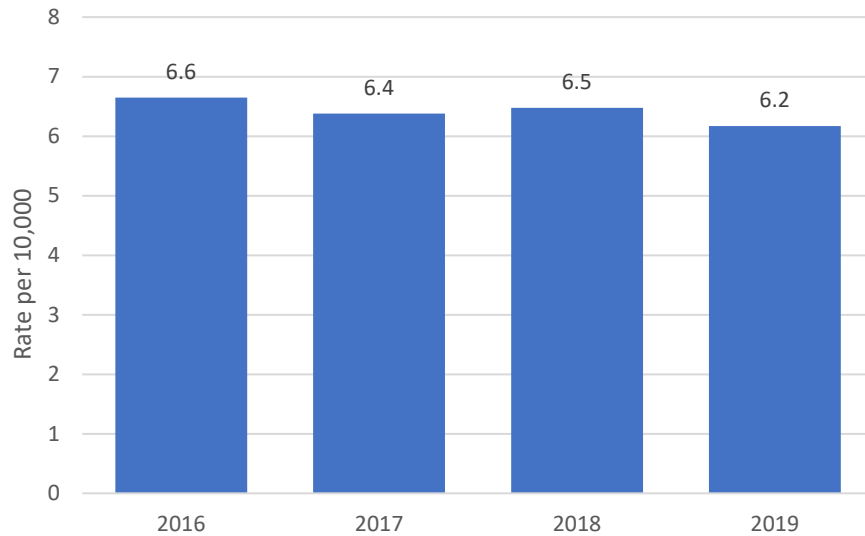


Asthma Trends Report

Hospital Discharge 2016-2019

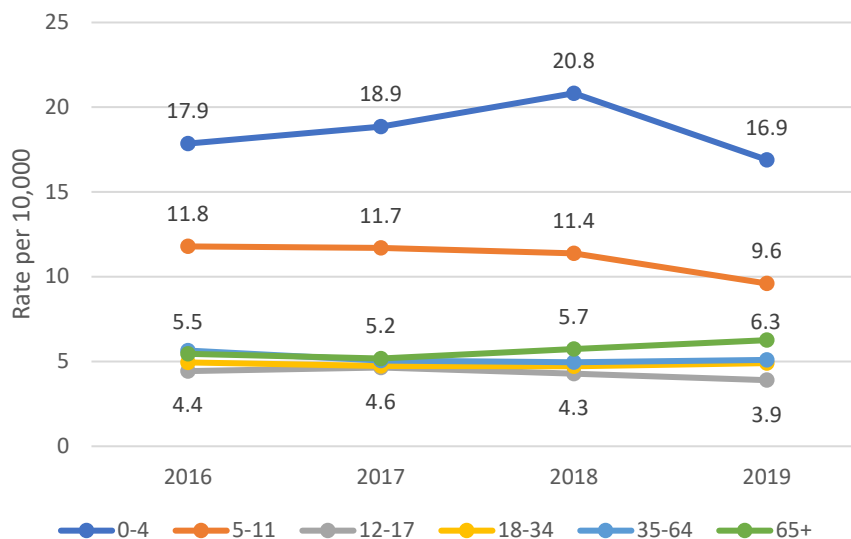
Hospitalizations

Figure 1. Asthma Hospitalization Rate, Illinois, 2016-2019



The asthma hospitalization rate in Illinois is about 6 per 10,000 population.

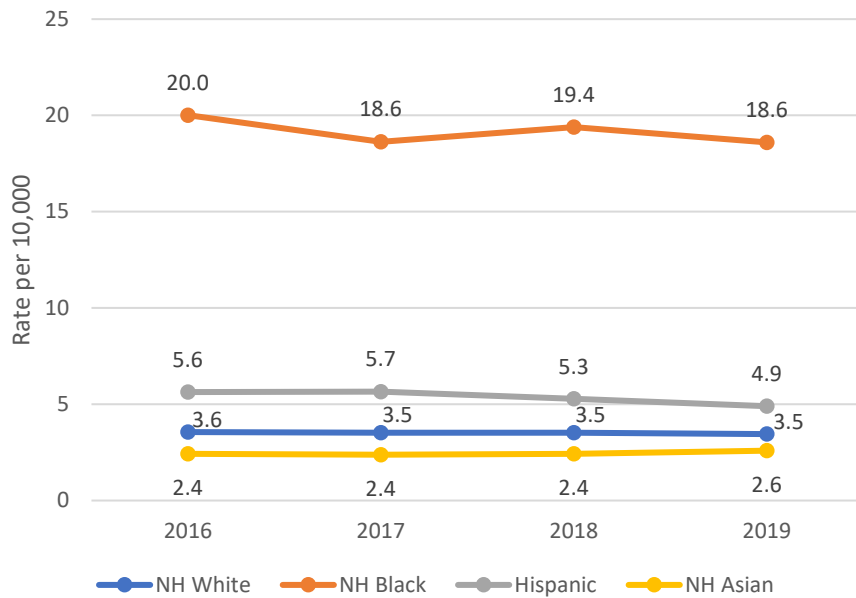
Figure 2. Asthma Hospitalization Rate by Age Groups, Illinois, 2016-2019



The asthma hospitalization rate in Illinois is highest among children 0-4 years old followed by children 5-11 years old. Though both age groups have seen a decline since 2016.

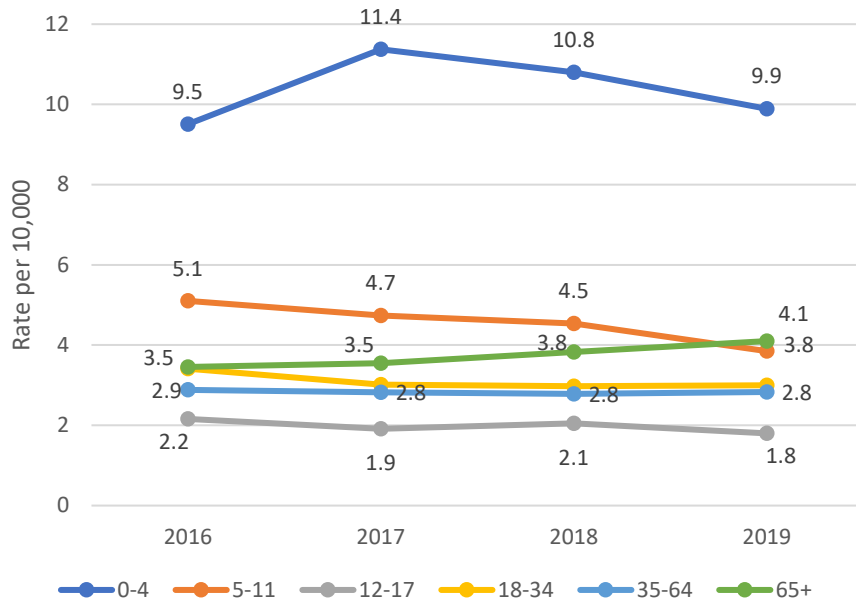
In 2019, the rate is over 4 times higher for the 0-4 age group compared to the 12-17-year age group.

Figure 3. Asthma Hospitalization Rate by Race/Ethnicity, Illinois, 2016-2019



The asthma hospitalization rate in Illinois among non-Hispanic (NH) Blacks is over 3 times higher than other race/ethnic groups.

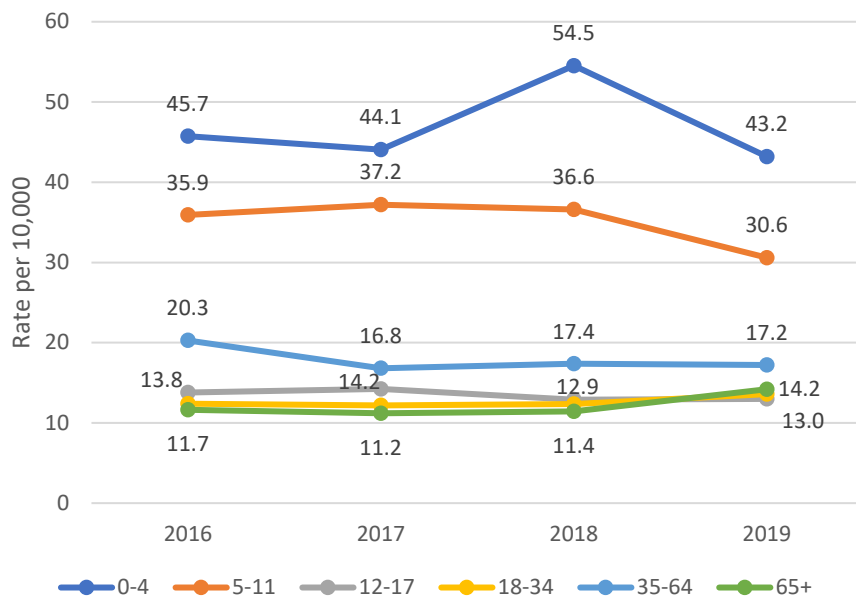
Figure 4. Non-Hispanic White Asthma Hospitalization Rate by Age Group, Illinois, 2016-2019



The asthma hospitalization rate in Illinois among NH White is highest among the age group 0-4 years, which is 2-3 times higher than other age groups.

Data source: Illinois Department of Public Health, Division of Patient Safety and Quality, Hospital Discharge Dataset, accessed Sept 2, 2020

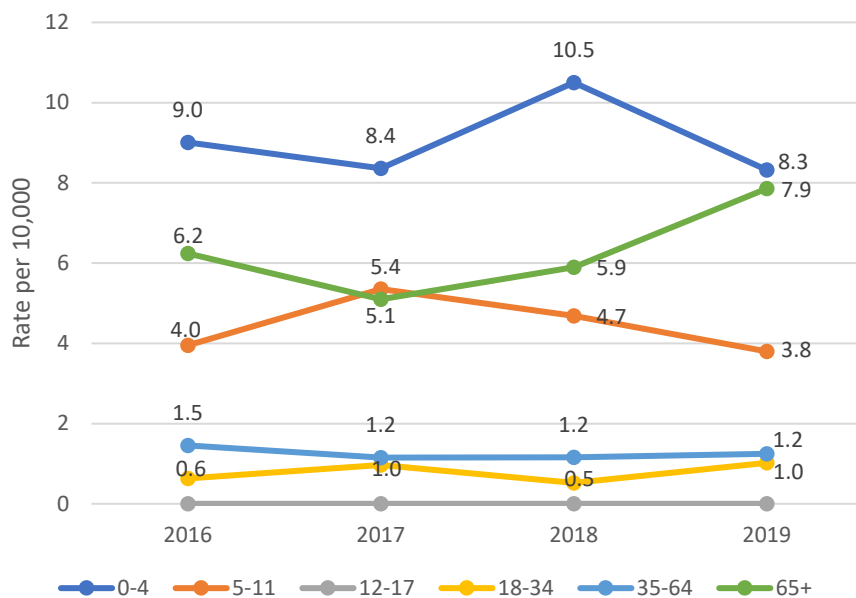
Figure 5. Non-Hispanic Black Asthma Hospitalizations by Age Group, Illinois, 2016-2019



The asthma hospitalization rate in Illinois among NH Black is highest among age group 0-4 years followed by 5-11 years.

The asthma hospitalization rate is 2 - 3 times higher in the two younger age groups compared to the other age groups.

Figure 6. Non-Hispanic Asian Asthma Hospitalizations by Age Group, Illinois, 2016-2019

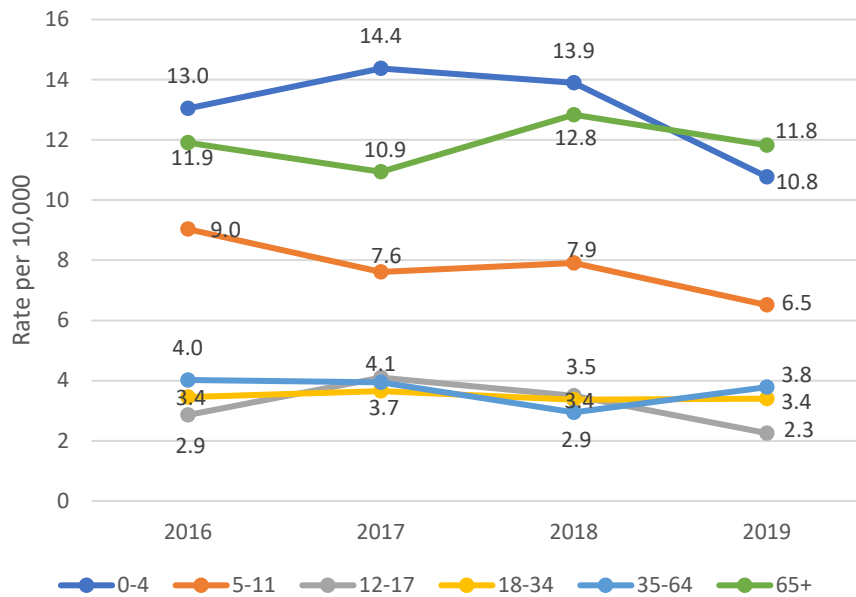


The asthma hospitalization rate in Illinois among NH Asian is highest among age group 0-4 years followed by those over 65 years.

The rate in those over 65 years have increased over the past two years.

Data source: Illinois Department of Public Health, Division of Patient Safety and Quality, Hospital Discharge Dataset, accessed Sept 2, 2020

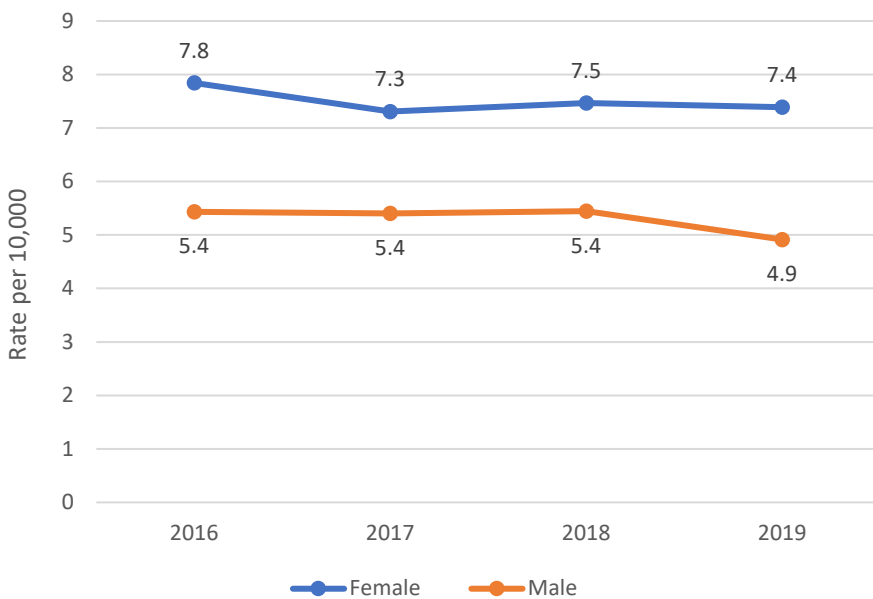
Figure 7. Hispanic Asthma Hospitalizations by Age Group, Illinois, 2016-2019



The asthma hospitalization rate in Illinois among Hispanics is highest among age group 65+ and 0-4 years.

There was a decrease in case rate among age groups 0-4 years and 5-11 years from 2016-2019, while other age groups were relatively stable.

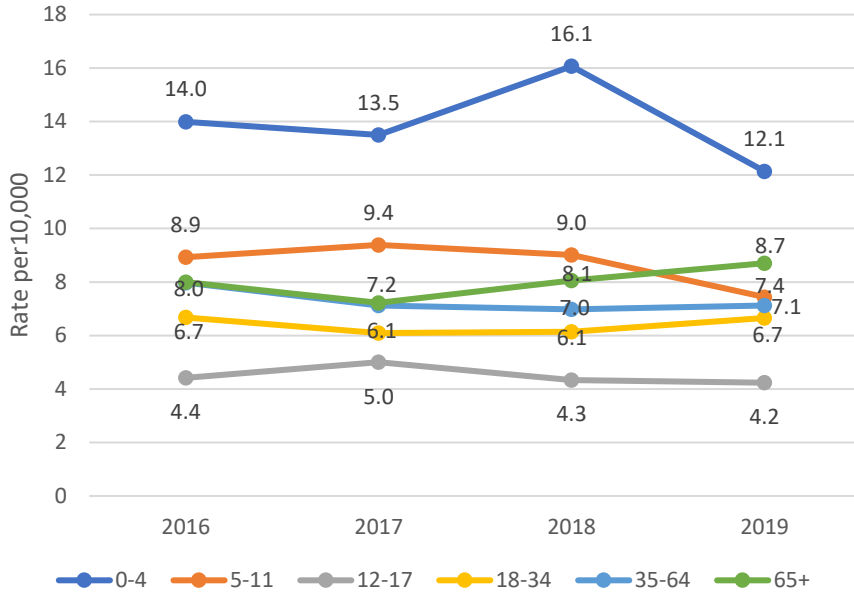
Figure 8. Asthma Hospitalizations by Gender, Illinois, 2016-2019



The asthma hospitalization rate in Illinois is higher among females than males.

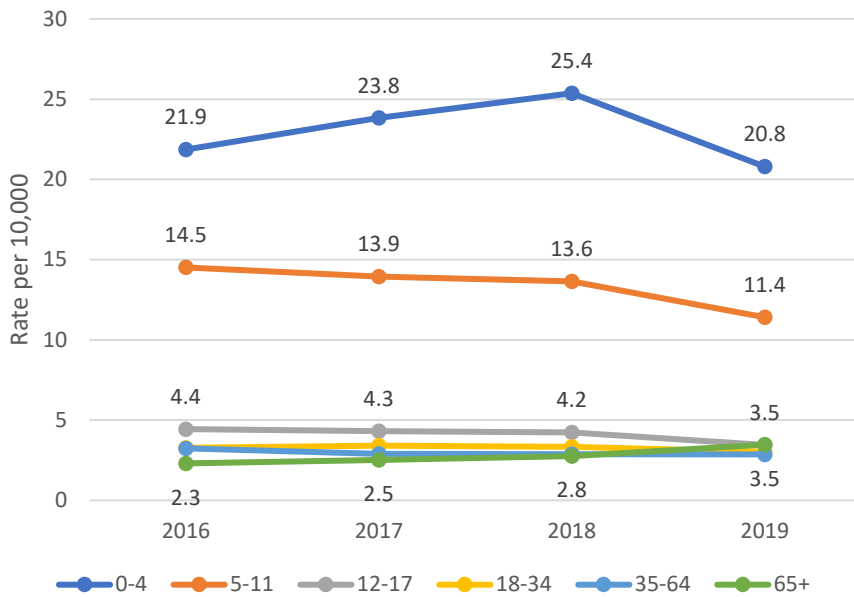
Data source: Illinois Department of Public Health, Division of Patient Safety and Quality, Hospital Discharge Dataset, accessed Sept 2, 2020

Figure 9. Female Asthma Hospitalizations by Age Group, Illinois, 2016-2019



The asthma hospitalization rate in Illinois among females is highest for age group 0-4 years and lowest in those 12-17 years.

Figure 10. Male Asthma Hospitalizations by Age Group, Illinois, 2016-2019

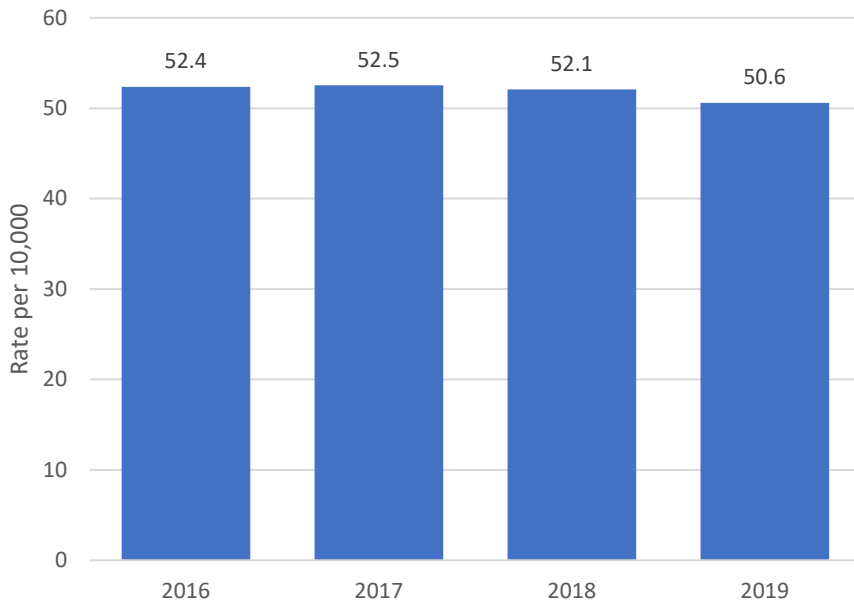


The asthma hospitalization rate in Illinois among males is highest for age group 0-4 years followed by those 5-11 years. These rates are 3-6 times higher than the other age groups.

Data source: Illinois Department of Public Health, Division of Patient Safety and Quality, Hospital Discharge Dataset, accessed Sept 2, 2020

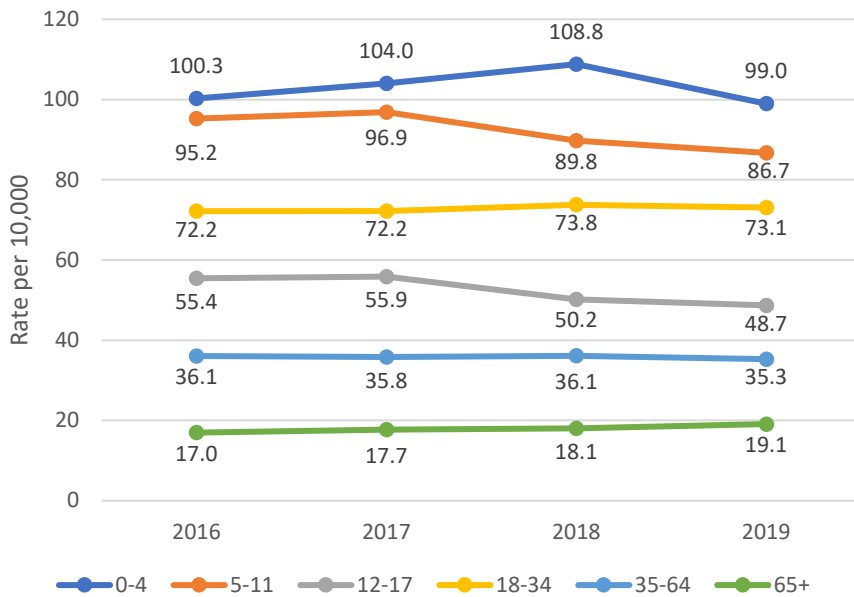
Emergency Department (ED) Visits

Figure 11. Asthma ED Visit Rate, Illinois, 2016-2019



The asthma ED visit rate in Illinois was 50.6 per 10,000 in 2019.

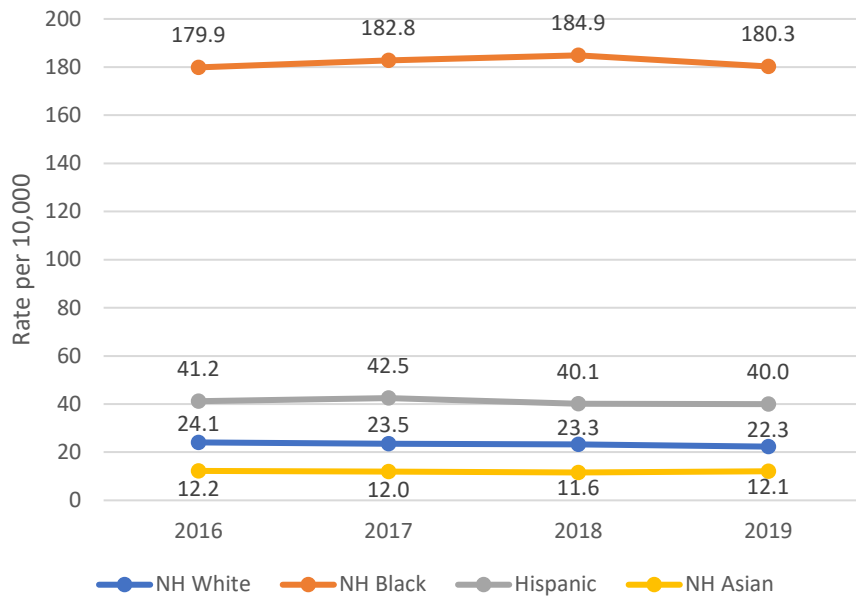
Figure 12. Asthma ED Visit Rate by Age Groups, Illinois, 2016-2019



The asthma ED visit rate in Illinois is highest for ages 0-4 years and lowest for age group 65+ years.

Data source: Illinois Department of Public Health, Division of Patient Safety and Quality, Hospital Discharge Dataset, accessed Sept 2, 2020

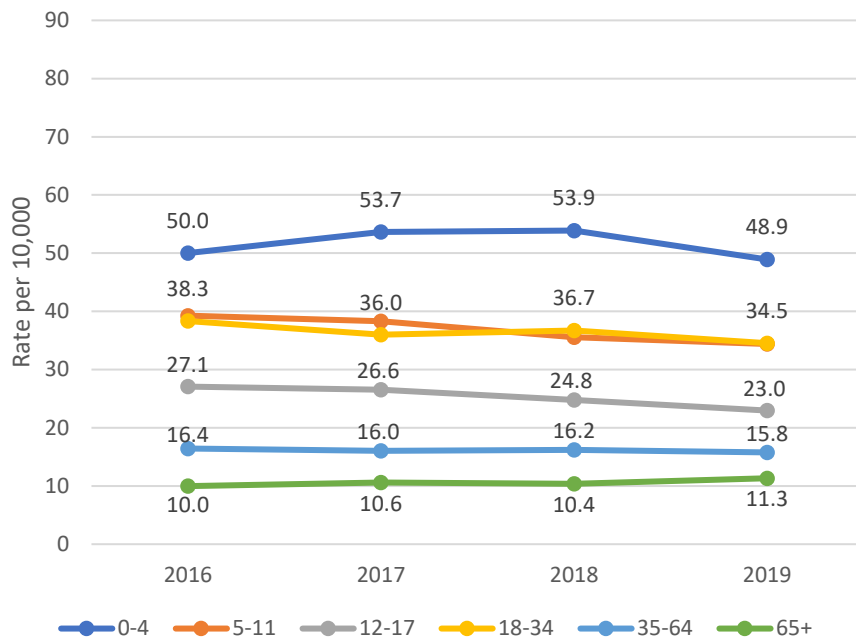
Figure 13. Asthma ED Visit Rate by Race/Ethnicity, Illinois, 2016-2019



The asthma ED visit rate has remained constant over the past four years.

The asthma ED visit rate is disproportionately highest in the NH Black population where it is 4.5 times higher than the Hispanic rate, 6 times higher than the NH White rate, and 15 times higher than NH Asian.

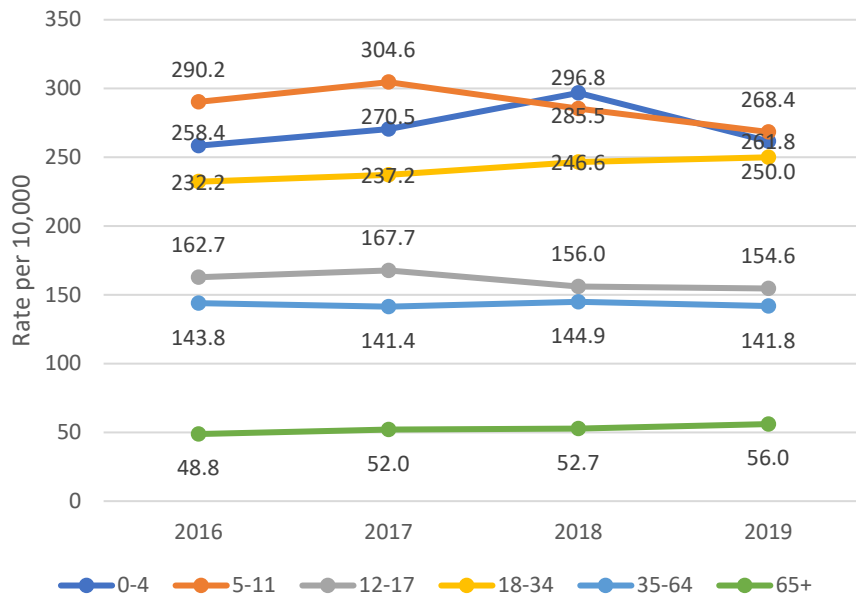
Figure 14. Non-Hispanic White Asthma ED Visits by Age Group, Illinois, 2016-2019



Asthma ED visits in Illinois among the non-Hispanic White population is highest among age group 0-4 and lowest among age group 65+ years.

Data source: Illinois Department of Public Health, Division of Patient Safety and Quality, Hospital Discharge Dataset, accessed Sept 2, 2020

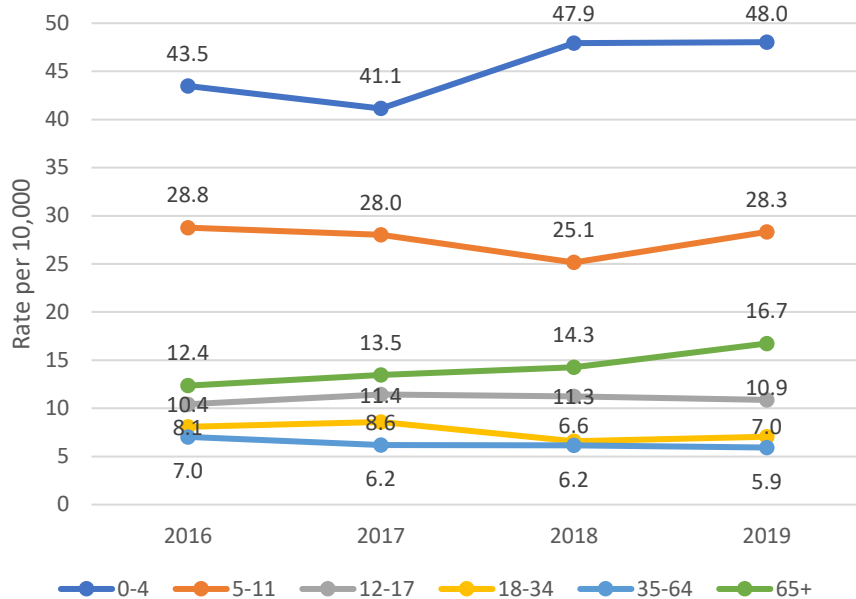
Figure 15. Non-Hispanic Black Asthma ED Visits by Age Group, Illinois, 2016-2019



The asthma ED visit rate in Illinois among the NH Black is highest among age group 5-11 years and 0-4 years and lowest for age group 65+ years.

There has been a steady rate increase in the 18-34 years and 65+ years age groups since 2016.

Figure 16. Non-Hispanic Asian Asthma ED Visits by Age Group, Illinois, 2016-2019

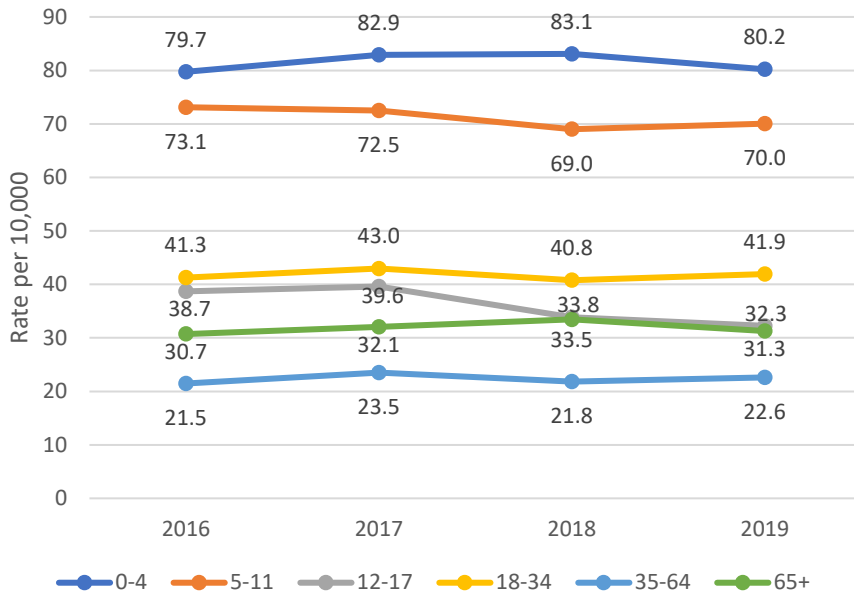


The asthma ED visit rate in Illinois among NH Asian is highest among those 0-4 years followed by age group 5-11 years.

There is an age disparity for NH Asians between the youngest age group and second youngest age group and between those groups and other age groups.

Data source: Illinois Department of Public Health, Division of Patient Safety and Quality, Hospital Discharge Dataset, accessed Sept 2, 2020

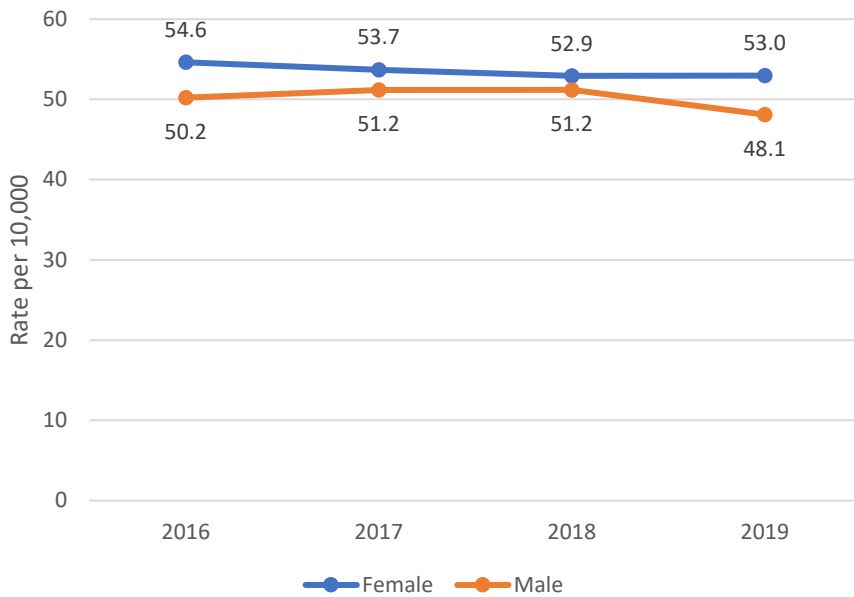
Figure 17. Hispanic Asthma ED Visits by Age Group, Illinois, 2016-2019



The asthma ED visit rate in Illinois among Hispanics is highest among those 0-4 years and 5-11 years.

These two younger age groups are about 2-4 times higher than other age groups.

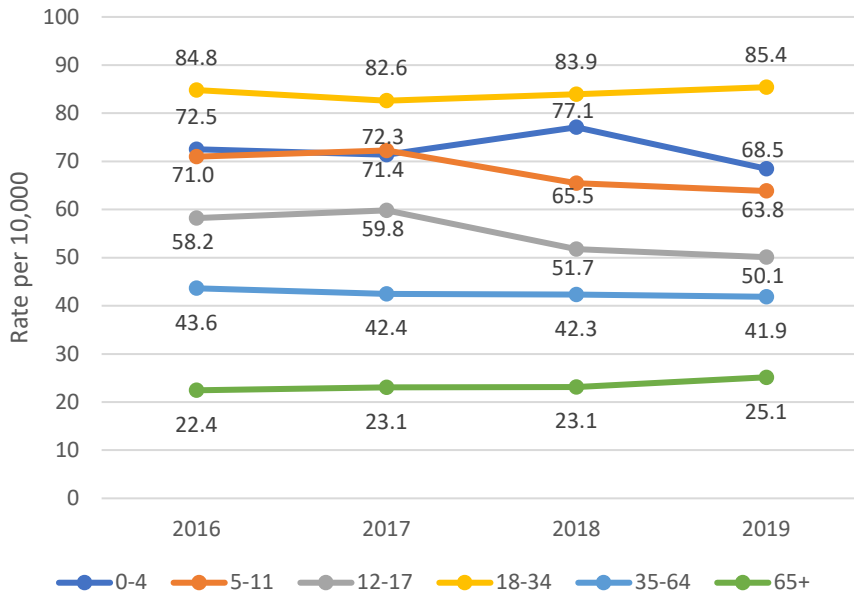
Figure 18. Asthma ED Visit Rate by Gender, Illinois, 2016-2019



The asthma ED visit rate in Illinois is higher among females than in males.

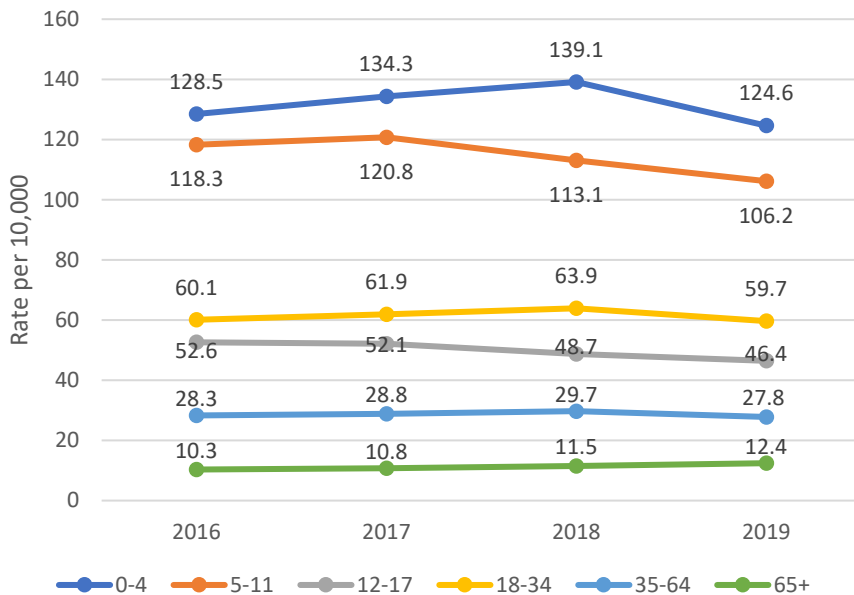
Data source: Illinois Department of Public Health, Division of Patient Safety and Quality, Hospital Discharge Dataset, accessed Sept 2, 2020

Figure 19. Female Asthma ED Visits by Age Group, Illinois, 2016-2019



The asthma ED visit rate in Illinois among females is highest among age group 18-34 years and lowest among age group 65+ years.

Figure 20. Male Asthma ED Visits by Age Group, Illinois, 2016-2019



The asthma ED visit rate in Illinois among males is highest among ages 0-4 years and 5-11 years and lowest for age 65+ years. The trends in male vary compared to the trend in females (depicted above).

Data source: Illinois Department of Public Health, Division of Patient Safety and Quality, Hospital Discharge Dataset, accessed Sept 2, 2020

Data source/methodology

Data was obtained from the Illinois Department of Public Health, Division of Patient Safety and Quality, Hospital Discharge Dataset, accessed Sept 2, 2020. Data was extracted by the Division of Chronic Disease. Cases were identified based on primary diagnoses of asthma, using an ICD 10 code of J45, and grouped by year of discharge.

Rates were calculated using the vintage intercensal population estimates for each year from the U.S. census.

Illinois Asthma Hospitalizations by Discharge Year

Table 1. Demographics of Asthma Hospitalizations, Illinois, 2016-2019

	2016		2017		2018		2019	
	Count	Rate per 10,000	Count	Rate per 10,000	Count	Rate per 10,000	Count	Rate per 10,000
Overall	8524	6.65	8155	6.38	8249	6.47	7864	6.20
Age Group								
0-4	1391	17.86	1452	18.86	1584	20.83	1260	16.9
5-11	1340	11.79	1310	11.69	1255	11.37	1044	9.6
12-17	450	4.44	467	4.65	425	4.28	381	3.9
18-34	1480	4.95	1405	4.74	1390	4.72	1417	4.9
35-64	2830	5.65	2515	5.05	2451	4.96	2483	5.1
65+	1033	5.45	1006	5.18	1144	5.74	1279	6.3
Gender								
Female	5105	7.84	4757	7.31	4840	7.47	4787	7.4
Male	3419	5.43	3398	5.40	3409	5.44	3077	4.9
Race/Ethnicity								
NH White	2849	3.56	2795	3.52	2768	3.52	2717	3.5
NH Black	3757	20.01	3479	18.64	3605	19.39	3445	18.6
Hispanic	1225	5.63	1241	5.66	1169	5.28	1097	4.9
NH Asian	178	2.42	179	2.38	186	2.42	199	2.6
NH Other	440	*	390	*	435	*	297	*

* Rate unavailable

Table 2. Non-Hispanic White Asthma Hospitalizations by Age Group, Illinois, 2016-2019

Age Group	2016		2017		2018		2019	
	Count	Rate per 10,000	Count	Rate per 10,000	Count	Rate per 10,000	Count	Rate per 10,000
0-4	392	9.5	464	11.4	435	10.8	394	9.9
5-11	303	5.1	277	4.7	261	4.5	219	3.8
12-17	119	2.2	104	1.9	109	2.1	93	1.8
18-34	581	3.4	505	3.0	491	3.0	483	3.0
35-64	948	2.9	915	2.8	888	2.8	888	2.8
65+	506	3.5	530	3.5	584	3.8	640	4.1

Table 3. Non-Hispanic Black Asthma Hospitalizations by Age Group, Illinois, 2016-2019

Age Group	2016		2017		2018		2019	
	Count	Rate per 10,000	Count	Rate per 10,000	Count	Rate per 10,000	Count	Rate per 10,000
0-4	612	45.7	579	44.1	700	54.5	545	43.2
5-11	668	35.9	683	37.2	664	36.6	550	30.6
12-17	232	13.8	233	14.2	206	12.9	205	13.0
18-34	599	12.4	587	12.2	595	12.4	653	13.6
35-64	1390	20.3	1144	16.8	1174	17.4	1151	17.2
65+	256	11.7	253	11.2	266	11.4	341	14.2

Table 4. Non-Hispanic Asian Asthma Hospitalizations by Age Group, Illinois, 2016-2019

Age Group	2016		2017		2018		2019	
	Count	Rate per 10,000	Count	Rate per 10,000	Count	Rate per 10,000	Count	Rate per 10,000
0-4	40	9.0	37	8.4	46	10.5	35	8.3
5-11	25	4.0	34	5.4	30	4.7	24	3.8
12-17	<10	*	<10	*	<10	*	<10	*
18-34	13	0.6	20	1.0	11	0.5	21	1.0
35-64	42	1.5	34	1.2	35	1.2	38	1.2
65+	52	6.2	45	5.1	55	5.9	77	7.9

Table 5. Hispanic Asthma Hospitalizations by Age Group, Illinois, 2016-2019

Age Group	2016		2017		2018		2019	
	Count	Rate per 10,000	Count	Rate per 10,000	Count	Rate per 10,000	Count	Rate per 10,000
0-4	244	13.0	266	14.4	256	13.9	193	10.8
5-11	263	9.0	218	7.6	222	7.9	178	6.5
12-17	69	2.9	100	4.1	86	3.5	56	2.3
18-34	205	3.4	217	3.7	201	3.4	204	3.4
35-64	297	4.0	297	3.9	226	2.9	293	3.8
65+	147	11.9	143	10.9	178	12.8	173	11.8

Data source: Illinois Department of Public Health, Division of Patient Safety and Quality, Hospital Discharge Dataset, accessed Sept 2, 2020

Table 6. Female Asthma Hospitalizations by Age Group, Illinois, 2016-2019

Age Group	2016		2017		2018		2019	
	Count	Rate per 10,000	Count	Rate per 10,000	Count	Rate per 10,000	Count	Rate per 10,000
0-4	529	14.0	510	13.5	597	16.1	451	12.1
5-11	497	8.9	515	9.4	487	9.0	402	7.4
12-17	220	4.4	246	5.0	211	4.3	206	4.2
18-34	983	6.7	891	6.1	891	6.1	965	6.7
35-64	2030	8.0	1802	7.1	1750	7.0	1786	7.1
65+	846	8.0	793	7.2	904	8.1	977	8.7

Table 7. Male Asthma Hospitalizations by Age Group, Illinois, 2016-2019

Age Group	2016		2017		2018		2019	
	Count	Rate per 10,000	Count	Rate per 10,000	Count	Rate per 10,000	Count	Rate per 10,000
0-4	862	21.9	942	23.8	987	25.4	809	20.8
5-11	843	14.5	795	13.9	768	13.6	642	11.4
12-17	230	4.4	221	4.3	214	4.2	175	3.5
18-34	497	3.3	514	3.4	499	3.3	452	3.0
35-64	800	3.2	713	2.9	701	2.9	697	2.9
65+	187	2.3	213	2.5	240	2.8	302	3.5

Illinois Asthma Emergency Department (ED) Visits by Discharge Year

Table 8. Demographics of Asthma ED Visits, Illinois, 2016-2019

	2016		2017		2018		2019	
	Count	Rate per 10,000	Count	Rate per 10,000	Count	Rate per 10,000	Count	Rate per 10,000
Overall	67160	52.36	67164	52.53	66359	52.08	64104	50.60
Age Group								
0-4	7812	100.28	8007	103.99	8278	108.83	7392	99.0
5-11	10825	95.24	10852	96.88	9905	89.77	9426	86.7
12-17	5623	55.43	5616	55.87	4987	50.21	4791	48.70
18-34	21597	72.18	21418	72.19	21731	73.76	21314	73.1
35-64	18087	36.09	17827	35.79	17858	36.11	17276	35.3
65+	3216	16.98	3444	17.73	3600	18.06	3905	19.10
Gender								
Female	35560	54.63	34961	53.71	34305	52.94	34150	53.0
Male	31599	50.22	32203	51.18	32052	51.19	29952	48.1
Race/Ethnicity								
NH White	19280	24.06	18684	23.51	18340	23.29	17420	22.3
NH Black	33766	179.87	34118	182.75	34374	184.87	33408	180.3
Hispanic	8971	41.23	9321	42.48	8875	40.08	8874	40.0
NH Asian	900	12.23	901	11.98	890	11.58	930	12.10
NH Other	3827	*	3647	*	3331	*	2687	*

Table 9. Non-Hispanic White Asthma ED Visits by Age Group, Illinois, 2016-2019

Age Group	2016		2017		2018		2019	
	Count	Rate per 10,000	Count	Rate per 10,000	Count	Rate per 10,000	Count	Rate per 10,000
0-4	2062	50.0	2189	53.7	2171	53.9	1948	48.4
5-11	2332	39.3	2240	38.3	2044	35.6	1957	34.0
12-17	1492	27.1	1441	26.6	1318	24.8	1198	22.5
18-34	6529	38.3	6033	36.0	6056	36.7	5608	34.0
35-64	5404	16.4	5199	16.0	5169	16.2	4947	15.5
65+	1461	10.0	1582	10.6	1582	10.4	1762	11.6

Table 10. Non-Hispanic Black Asthma ED Visits by Age Group, Illinois, 2016-2019

Age Group	2016		2017		2018		2019	
	Count	Rate per 10,000	Count	Rate per 10,000	Count	Rate per 10,000	Count	Rate per 10,000
0-4	3459	258.4	3554	270.5	3810	296.8	3304	261.8
5-11	5398	290.2	5594	304.6	5180	285.5	4818	268.4
12-17	2738	162.7	2745	167.7	2492	156.0	2438	154.6
18-34	11237	232.2	11428	237.2	11873	246.6	12014	250.0
35-64	9862	143.8	9623	141.4	9793	144.9	9490	141.8
65+	1072	48.8	1174	52.0	1226	52.7	1344	56.0

Table 11. Non-Hispanic Asian Asthma ED Visits by Age Group, Illinois, 2016-2019

Age Group	2016		2017		2018		2019	
	Count	Rate per 10,000	Count	Rate per 10,000	Count	Rate per 10,000	Count	Rate per 10,000
0-4	193	43.5	182	41.1	210	47.9	202	48.0
5-11	182	28.8	178	28.0	161	25.1	179	28.3
12-17	54	10.4	61	11.4	61	11.3	59	10.9
18-34	165	8.1	178	8.6	139	6.6	145	7.0
35-64	203	7.0	183	6.2	186	6.2	181	5.9
65+	103	12.4	119	13.5	133	14.3	164	16.7

Table 12. Hispanic Asthma ED Visits by Age Group, Illinois, 2016-2019

Age Group	2016		2017		2018		2019	
	Count	Rate per 10,000	Count	Rate per 10,000	Count	Rate per 10,000	Count	Rate per 10,000
0-4	1492	79.7	1534	82.9	1531	83.1	1437	80.2
5-11	2129	73.1	2076	72.5	1938	69.0	1914	70.0
12-17	933	38.7	966	39.6	832	33.8	801	32.3
18-34	2452	41.3	2554	43.0	2435	40.8	2513	41.9
35-64	1586	21.5	1772	23.5	1675	21.8	1751	22.6
65+	379	30.7	419	32.1	464	33.5	458	31.3

Table 13. Female Asthma ED Visits by Age Group, Illinois, 2016-2019

Age Group	2016		2017		2018		2019	
	Count	Rate per 10,000	Count	Rate per 10,000	Count	Rate per 10,000	Count	Rate per 10,000
0-4	2741	72.5	2698	71.4	2864	77.1	2544	68.5
5-11	3953	71.0	3965	72.3	3540	65.5	3451	63.8
12-17	2897	58.2	2942	59.8	2517	51.7	2437	50.1
18-34	12487	84.8	12082	82.6	12176	83.9	12393	85.4
35-64	11105	43.6	10741	42.4	10612	42.3	10502	41.9
65+	2377	22.4	2533	23.1	2596	23.1	2823	25.1

Table 14. Male Asthma ED Visits by Age Group, Illinois, 2016-2019

Age Group	2016		2017		2018		2019	
	Count	Rate per 10,000	Count	Rate per 10,000	Count	Rate per 10,000	Count	Rate per 10,000
0-4	5071	128.5	5309	134.3	5413	139.1	4848	124.6
5-11	6872	118.3	6887	120.8	6365	113.1	5975	106.2
12-17	2726	52.6	2674	52.1	2470	48.7	2354	46.4
18-34	9109	60.1	9336	61.9	9555	63.9	8919	59.7
35-64	6982	28.3	7086	28.8	7245	29.7	6774	27.8
65+	839	10.3	911	10.8	1004	11.5	1082	12.4