

Appendix Table 1. Characteristics of pediatric patients with asthma, by household income as a percent of the US federal poverty level (FPL) (N=30,196)

	Under 100% FPL N=23,624 N (%)	100-200% FPL N=4,984 N (%)	Above 200% FPL N=1,588 N (%)
Race/ethnicity			
Latino	10852 (45.9)	2664 (53.5)	389 (24.5)
Non-Hispanic Black	6944 (29.4)	694 (13.9)	222 (14.0)
Non-Hispanic White	5828 (24.7)	1626 (32.6)	977 (61.5)
Age category at first visit			
<3	5437 (23.0)	1148 (23.0)	345 (21.7)
3 to 5	4641 (19.6)	1023 (20.5)	251 (15.8)
6 to 10	7294 (30.9)	1575 (31.6)	521 (32.8)
11 to 17	6252 (26.5)	1238 (24.8)	471 (29.7)
Sex			
Male	13194 (55.8)	2822 (56.6)	909 (57.2)
Female	10430 (44.2)	2162 (43.4)	679 (42.8)
Insurance type			
Never Insured	654 (2.8)	110 (2.2)	53 (3.3)
Some Private	805 (3.4)	393 (7.9)	504 (31.7)
Some Public	20757 (87.9)	3868 (77.6)	797 (50.2)
Some Private and Public	1408 (6.0)	613 (12.3)	234 (14.7)
Visits per year			
<2	8117 (34.4)	1660 (33.3)	540 (34.0)
2 up to 5	1483 (6.3)	244 (4.9)	89 (5.6)
5 up to 10	9670 (40.9)	2153 (43.2)	696 (43.8)
>10	4354 (18.4)	927 (18.6)	263 (16.6)
Maximum Documented Asthma Severity			
Intermittent	8156 (34.5)	1641 (32.9)	522 (32.9)
Mild	3540 (15.0)	680 (13.6)	188 (11.8)
Moderate or Severe	2144 (9.1)	463 (9.3)	131 (8.2)
Not documented	9784 (41.4)	2200 (44.1)	747 (47.0)
Body Mass Index			
Never overweight/obese	9272 (39.2)	1967 (39.5)	708 (44.6)
Sometimes overweight/obese	6591 (27.9)	1468 (29.5)	412 (25.9)
Always overweight/obese	7761 (32.9)	1549 (31.1)	468 (29.5)
Albuterol prescribed ever within study period			
Yes	20657 (87.4)	4426 (88.8)	1353 (85.2)
Primary Language			
English	16528 (70.0)	3128 (64.6)	1390 (87.5)
Spanish	7096 (30.0)	1766 (35.4)	198 (12.5)
2010 RUCA designation of patients' primary clinics			
Urban	23414 (99.1)	4903 (98.4)	1418 (89.3)
Rural	210 (0.9)	81 (1.6)	170 (10.7)
Neighborhood FPL			
Under 100%	1591 (6.7)	56 (1.1)	21 (1.3)
≥100% to <200%	10064 (42.6)	1660 (33.3)	316 (19.9)
200% or higher	11969 (50.7)	3268 (65.6)	1251 (78.8)

Appendix Table 2. Characteristics of pediatric patients with asthma, by neighborhood income as a percent of the US federal poverty level (FPL) (N=30,196)

	Under 100% FPL N=1,668 N (%)	100-200% FPL N=12,040 N (%)	Above 200% FPL N=16,488 N (%)
Race/ethnicity			
Latino	290 (17.4)	6413 (53.3)	7202 (43.7)
Non-Hispanic Black	1248 (74.8)	3529 (29.3)	3083 (18.7)
Non-Hispanic White	130 (7.8)	2098 (17.4)	6203 (37.6)
Age category at first visit			
<3	311 (18.6)	2981 (24.8)	3638 (22.1)
3 to 5	349 (20.9)	2504 (20.8)	3062 (18.6)
6 to 10	591 (35.4)	3710 (30.8)	5089 (30.9)
11 to 17	417 (25.0)	2845 (23.6)	4699 (28.5)
Sex			
Male	961 (57.6)	6730 (55.9)	9234 (56.0)
Female	707 (42.4)	5310 (44.1)	7254 (44.0)
Insurance type			
Never Insured	50 (3.0)	267 (2.2)	500 (3.0)
Some Private	27 (1.6)	391 (3.2)	1284 (7.8)
Some Public	1548 (92.8)	10671 (88.6)	13203 (80.1)
Some Private and Public	43 (2.6)	711 (5.9)	1501 (9.1)
Visits per year			
<2	701 (42.0)	4046 (33.6)	5570 (33.8)
2 up to 5	90 (5.4)	719 (6.0)	1007 (6.1)
5 up to 10	620 (37.2)	4889 (40.6)	7010 (42.5)
>10	257 (15.4)	2386 (19.8)	2901 (17.6)
Maximum Documented Asthma Severity			
Intermittent	632 (37.9)	4410 (36.6)	5277 (32.0)
Mild	341 (20.4)	1889 (15.7)	2178 (13.2)
Moderate or Severe	172 (10.3)	1109 (9.2)	1457 (8.8)
Not documented	523 (31.4)	4632 (38.5)	7576 (45.9)
Body Mass Index			
Never overweight/obese	748 (44.8)	4716 (39.2)	6483 (39.3)
Sometimes overweight/obese	371 (22.2)	3347 (27.8)	4753 (28.8)
Always overweight/obese	549 (32.9)	3977 (33.0)	5252 (31.9)
Albuterol prescribed ever within study period			
Yes	1421 (85.2)	10739 (89.2)	14276 (86.6)
Primary Language			
English	1520 (91.1)	7741 (64.3)	11875 (72.0)
Spanish	148 (8.9)	4299 (35.7)	4613 (28.0)
2010 RUCA designation of patients' primary clinics			
Urban	1668 (100.0)	12014 (99.8)	16053 (97.4)
Rural	0 (0)	26 (0.2)	435 (2.6)
Household FPL			
Under 100%	1591 (95.4)	10064 (83.6)	11969 (72.6)
≥100% to <200%	56 (3.4)	1660 (13.8)	3268 (19.8)
200% or higher	21 (1.3)	316 (2.6)	1251 (7.6)

Appendix Table 3. Patient Characteristics – Persistent Asthma Sample

	Overall N=6,665 N (%)	Latino N=3,087 N (%)	Non-Latino Black N=2,103 N (%)	Non-Latino White N=1,475 N (%)
Race/ethnicity				
Age category at first visit				
<3	1572 (23.6)	914 (29.6)	327 (15.5)	331 (22.4)
3 to 5	1377 (20.7)	714 (23.1)	410 (19.5)	253 (17.2)
6 to 10	2130 (32.0)	971 (31.5)	711 (33.8)	448 (30.4)
11 to 17	1586 (23.8)	488 (15.8)	655 (31.1)	443 (30.0)
Sex				
Male	3786 (56.8)	1805 (58.5)	1140 (54.2)	841 (57.0)
Female	2879 (43.2)			
Insurance type				
Never Insured	125 (1.9)	41 (1.3)	61 (2.9)	23 (1.6)
Some Private	295 (4.4)	51 (1.7)	118 (5.6)	126 (8.5)
Some Public	5745 (86.2)	2795 (90.5)	1803 (85.7)	1147 (77.8)
Some Private and Public	500 (7.5)	200 (6.5)	121 (5.8)	179 (12.1)
Visits per year				
<2	1135 (17.0)	347 (11.2)	493 (23.4)	295 (20.0)
2 up to 5	2926 (43.9)	1321 (42.8)	936 (44.5)	669 (45.4)
5 up to 10	1905 (28.7)	1050 (34.0)	481 (22.9)	374 (25.4)
>10	699 (10.5)	369 (12.0)	193 (9.2)	137 (9.3)
Maximum Documented Asthma Severity				
Mild	4106 (61.6)	1931 (62.6)	1341 (63.8)	834 (56.5)
Moderate or Severe	2559 (38.4)	1156 (37.4)	762 (36.2)	641 (43.5)
Body Mass Index				
Never overweight/obese	2382 (35.7)	985 (31.9)	791 (37.6)	606 (41.1)
Sometimes overweight/obese	2098 (31.5)	1081 (35.0)	577 (27.4)	440 (29.8)
Always overweight/obese	2185 (32.8)	1021 (33.1)	735 (35.0)	429 (29.1)
Albuterol prescribed ever within study period				
Yes	6267 (94.0)	2972 (96.3)	1940 (92.2)	1355 (91.9)
Primary Language				
English	4658 (69.9)	1080 (35.0)	2103 (100.0)	1475 (100.0)
Spanish	2007 (30.1)	2007 (65.0)	0 (0.0)	0 (0.0)
2010 RUCA designation of patients' primary clinics				
Urban	6,598 (99.0)	3071 (99.5)	2101 (99.9)	1426 (96.7)
Rural	67 (1.0)	16 (0.5)	<10 (0.1)	49 (3.3)
Household FPL				
Under 100%	5301 (79.5)	2373 (76.9)	1871 (89.0)	1057 (71.7)
≥100% to <200%	1063 (16.0)	622 (20.1)	175 (8.3)	266 (18.0)
200% or higher	301 (4.5)	92 (3.0)	57 (2.7)	152 (10.3)
Neighborhood FPL				
Under 100%	481 (7.2)	69 (2.2)	380 (18.1)	32 (2.2)
≥100% to <200%	2810 (42.2)	1512 (49.0)	882 (41.9)	416 (28.2)
200% or higher	3374 (50.6)	1506 (48.8)	841 (40.0)	1027 (69.6)

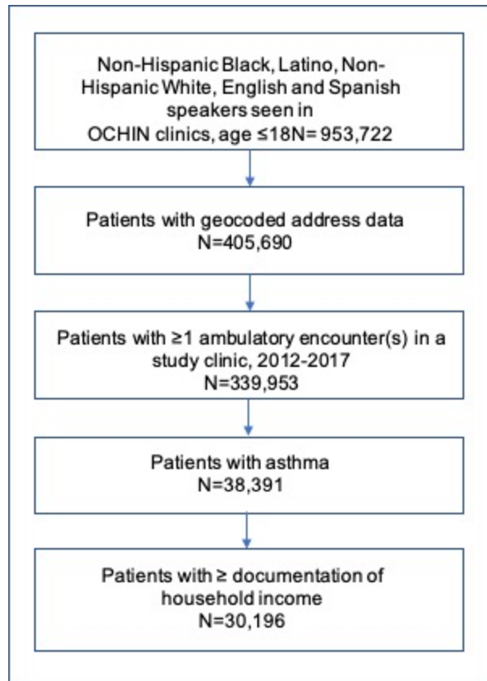
Note: RUCA = rural-urban commuting area, FPL = income as a percent of federal poverty level

Appendix Table 4. Care outcomes overall in full sample and sample with persistent asthma

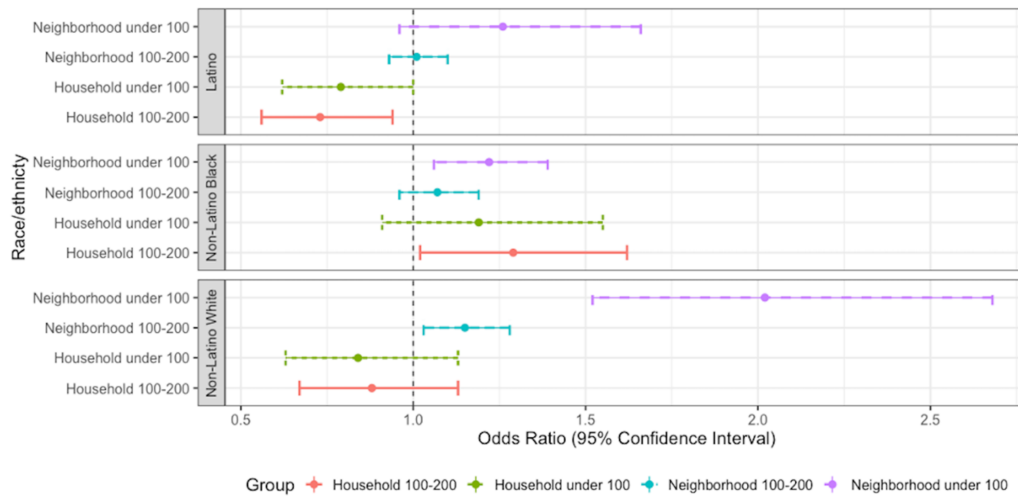
	Odds of having ≥ 2 asthma visits per year OR (95% CI) (N=30,196)	Rates of albuterol prescription RR (95%CI) (N=30,196)
Household FPL categories		
Under 100%	0.90 (0.75-1.07)	0.95 (0.89-1.01)
$\geq 100\%$ to $< 200\%$	0.88 (0.74-1.06)	0.95 (0.90-1.01)
200% or higher	Ref.	Ref.
Neighborhood FPL categories		
Under 100%	1.26 (1.12-1.41)	0.98 (0.91-1.06)
$\geq 100\%$ to $< 200\%$	1.05 (0.99-1.12)	1.07 (1.02-1.13)
200% or higher	Ref.	Ref.
	Rate of inhaled corticosteroids per year RR (95%CI) (N=6,665)	Odds of ever having inhaled corticosteroids prescribed OR 95% CI (N=6,665)
Household FPL categories		
Under 100%	0.93 (0.81-1.08)	1.19 (0.93-1.51)
$\geq 100\%$ to $< 200\%$	1.00 (0.85-1.17)	1.24 (0.94-1.63)
200% or higher	Ref.	Ref.
Neighborhood FPL categories		
Under 100%	1.02 (0.91-1.14)	1.01 (0.84-1.21)
$\geq 100\%$ to $< 200\%$	1.10 (1.03-1.17)	1.02 (0.93-1.12)
200% or higher	Ref.	Ref.

Note: GEE logistic and negative binomial models adjusted for age at first visit, sex, insurance, body mass index, asthma severity.

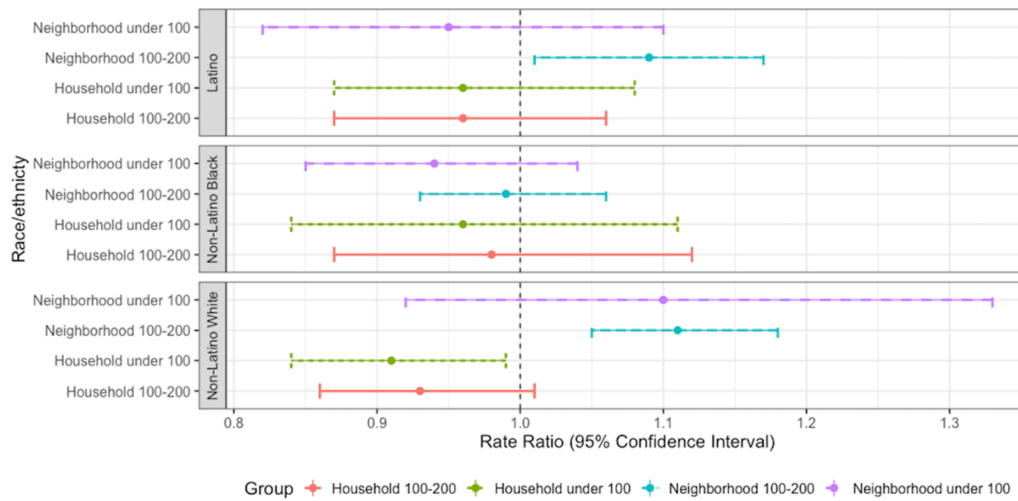
OR=adjusted odds ratio; RR=adjusted rate ratio; FPL=income as percent of federal poverty level



Appendix Figure 1. Study Participant Inclusion.



Appendix Figure 2. Odds ratios of having ≥ 2 asthma visits per year by race/ethnicity. Note: Y-axis labels are defined as: “Under 100” = income as percent of federal poverty level <100%; “100-200” = income as percent of federal poverty level between 100% and 200%. The reference group was $\geq 200\%$ FPL. GEE logistic models adjusted for age at first visit, race/ethnicity, sex, insurance, body mass index, asthma severity.



Appendix Figure 3. Rate ratios of albuterol per year by race/ethnicity.

Note: Y-axis labels are defined as: “Under 100” = income as percent of federal poverty level <100%; “100-200” = income as percent of federal poverty level between 100% and 200%. The reference group was $\geq 200\%$ FPL. GEE negative binomial models adjusted for age at first visit, sex, insurance, visits per year, body mass index, asthma severity.