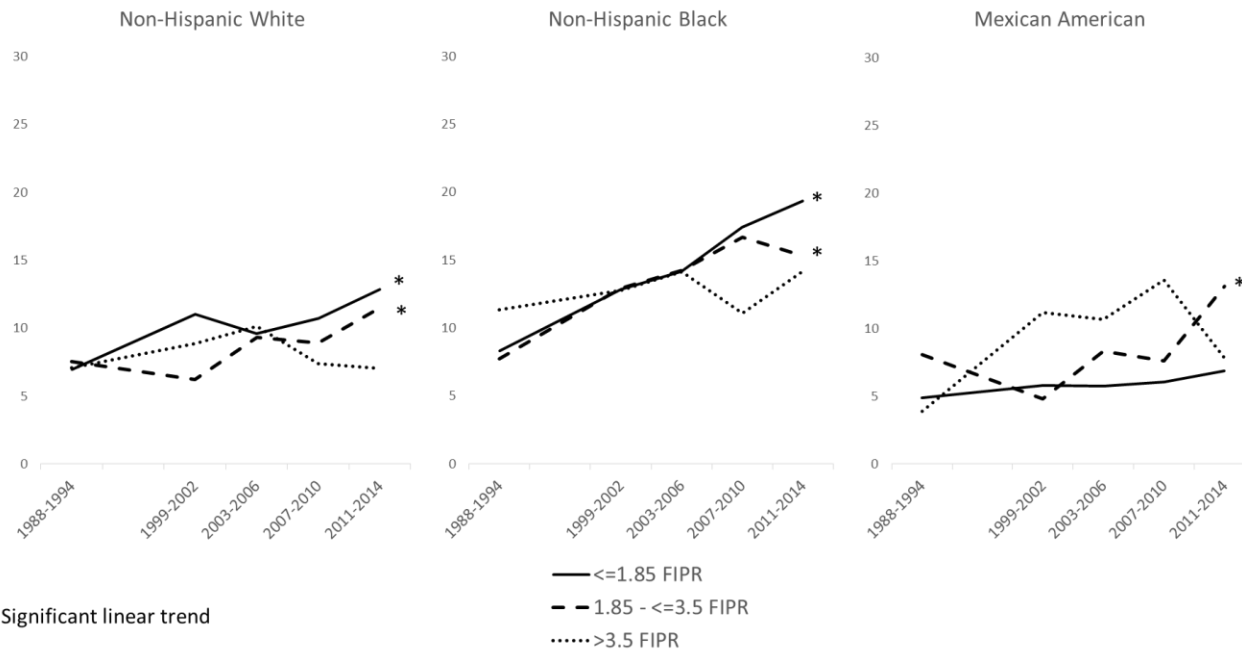
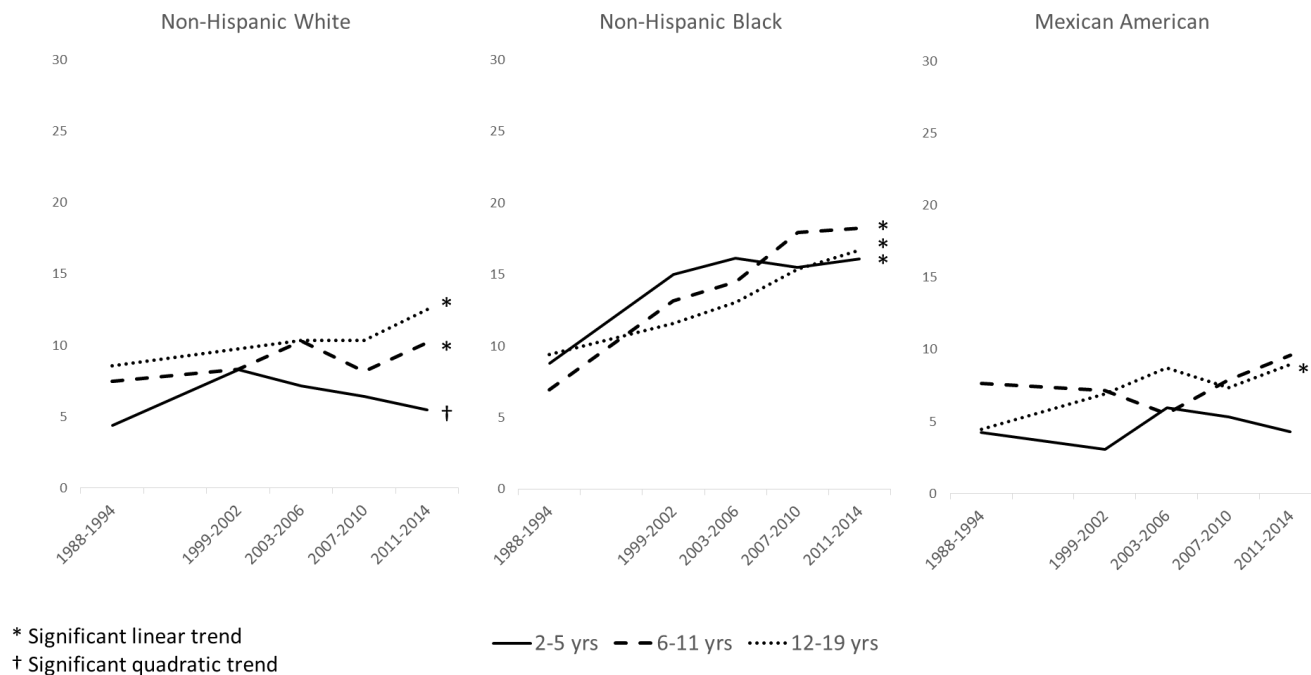


Supplemental Figure A. Current Asthma Prevalence Among Youth 2-19 Years of Age, by Race/Ethnicity and Poverty Status, United States, 1988-2014



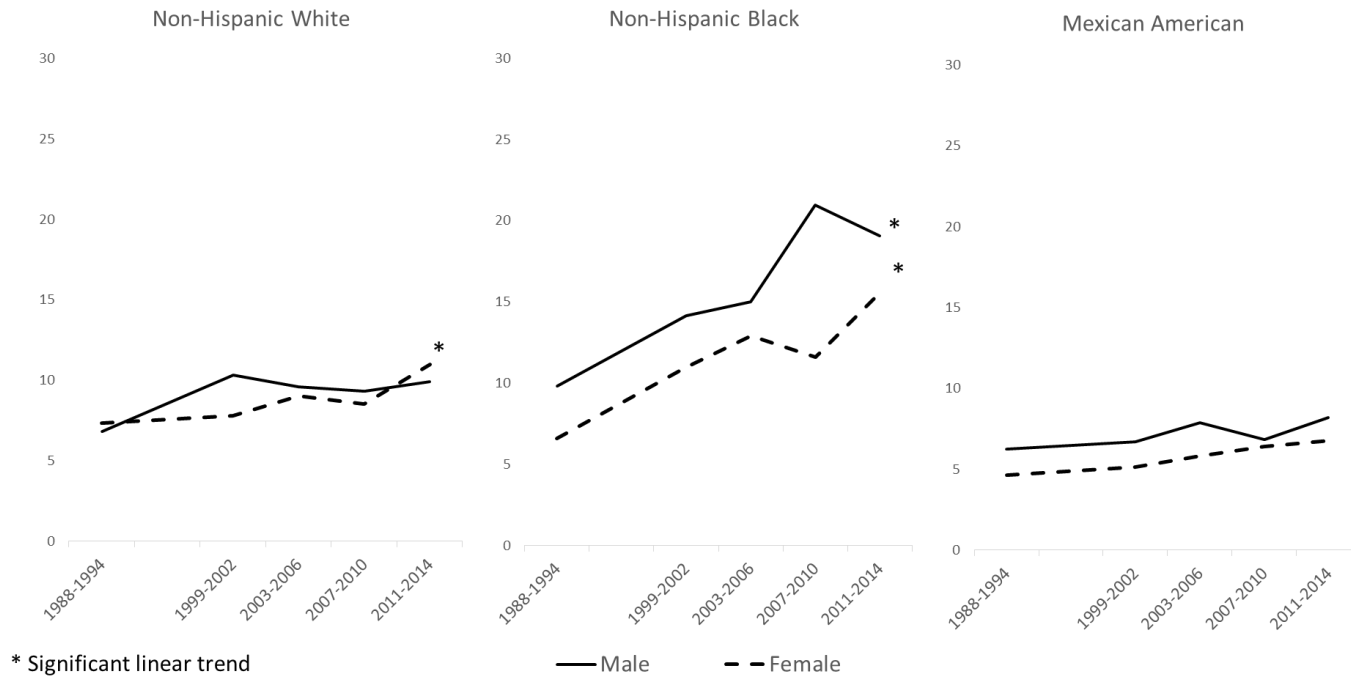
Data Source: National Health and Nutrition Examination Survey, National Center for Health Statistics

Supplemental Figure B. Current Asthma Prevalence Among Youth 2-19 Years of Age, by Race/Ethnicity and Age Group, United States, 1988-2014



Data Source: National Health and Nutrition Examination Survey, National Center for Health Statistics

Supplemental Figure C. Current Asthma Prevalence Among Youth 2-19 Years of Age, by Race/Ethnicity and Sex, United States, 1988-2014



Data Source: National Health and Nutrition Examination Survey, National Center for Health Statistics

### **Sensitivity analysis to assess the impact of income nonresponse:**

There was a 7.7% rate of item nonresponse for family income (n=3053 of 39,205 respondents).

Although this item nonresponse rate is below 10%, excluding the records with missing income information could introduce bias. In general, excluding records with missing information and conducting a complete case analysis when the rate of missing is relatively low is preferred to including a “missing” category. (1) A complete case analysis was therefore included in the main study. However, we also investigated the impact on other covariates of excluding these observations in the following way. First, the main unstratified logistic regression model was run for comparison, excluding the records with missing income as done in the main study (n=36,152). Next, this model was run excluding the income variable to assess impact of confounding of income on the other variables (n=36,152). Finally, this model excluding the income variable was run including participants with missing income (n=39,205). The results were very similar between models--no odds ratio changed more than 6% (See Supplemental Table 1).

- (1) Knol MJ, Janssen KJ, Donders AR, Egberts AC, Heerdink ER, Grobbee DE, et al. Unpredictable bias when using the missing indicator method or complete case analysis for missing confounder values: an empirical example. *J Clin Epidemiol.* 2010;63(7):728-36.

Supplemental Table 1: Sensitivity analysis for missing income responses

	Model 1: Main model excluding records with missing income (n=36152)			Model 2: Excluding records with missing income, excluding income variable (n=39205)			% difference AORs models 1 and 2	Model 3: Including records with missing income, excluding income variable (n=39205)			% difference AORs models 2 and 3
	AOR	Lower 95% CI	Upper 95% CI	AOR	Lower 95% CI	Upper 95% CI		AOR	Lower 95% CI	Upper 95% CI	
Survey year											
1988-1994	Ref			Ref				Ref			
1999-2002	1.28	1.03	1.59	1.27	1.02	1.59	-1%	1.31	1.05	1.62	3%
2003-2006	1.38	1.16	1.65	1.37	1.14	1.63	-1%	1.39	1.17	1.65	1%
2007-2010	1.38	1.15	1.65	1.36	1.14	1.63	-1%	1.41	1.18	1.68	4%
2011-2014	1.52	1.25	1.85	1.52	1.25	1.84	0%	1.56	1.29	1.88	3%
Race/ethnicity											
Non-Hispanic white	Ref			Ref				Ref			
Non-Hispanic black	1.52	1.35	1.72	1.60	1.42	1.80	5%	1.60	1.42	1.80	
Mexican American	0.66	0.57	0.78	0.70	0.61	0.81	6%	0.68	0.59	0.79	-3%
Other	1.01	0.86	1.20	1.05	0.89	1.24	4%	1.04	0.88	1.22	-1%
Weight status											
Normal	Ref			Ref				Ref			
Overweight	1.14	1.00	1.31	1.15	1.01	1.31	1%	1.21	1.06	1.38	5%
Obese	1.70	1.46	1.97	1.71	1.48	1.99	1%	1.70	1.47	1.96	-1%
Age group											
2-5 years	Ref			Ref				Ref			
6-11 years	1.28	1.12	1.46	1.27	1.11	1.45	-1%	1.27	1.12	1.44	0%
12-19 years	1.39	1.23	1.57	1.37	1.21	1.55	-1%	1.37	1.22	1.54	0%
Sex											
Male	Ref			Ref				Ref			
Female	0.86	0.78	0.95	0.86	0.78	0.95	0%	0.87	0.79	0.95	1%
Income status											
<=1.85 FIPR	Ref			--	--	--		--	--	--	
1.85 - <=3.5 FIPR	1.04	0.89	1.21	--	--	--	n/a	--	--	--	n/a
>3.5 FIPR	1.00	1.00	1.00	--	--	--	n/a	--	--	--	n/a

Note: Two decimal places are shown to better illustrate differences between AORs between models.

FIPR=Family income poverty ratio