Supplementary Figures

Supplementary Figure 1. Search terms and equations used for this review in PubMed, Scielo databases.

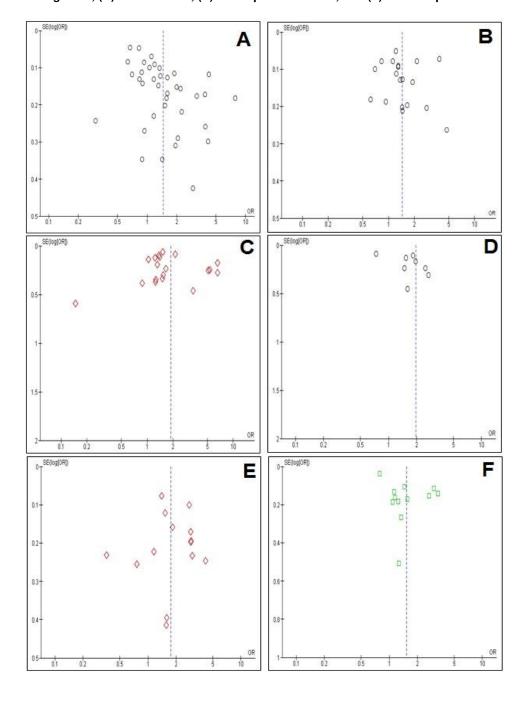
(asthma[tiab]) OR asthma prevalence*[tiab] OR wheeze*[tiab]
OR allergic diseases[tiab] OR allergic disorders[tiab] OR allerg*[tiab])
AND

(urbanization[tiab] OR urbanisation[tiab] OR urban area[tiab] OR rural area[tiab]
OR urban rural difference[tiab] OR rural urban comparison[tiab] OR urban environment
OR urban population[tiab] OR metropolitan area OR city OR inner-city[tiab]
OR municipal OR urban neighbourhood[tiab] OR country-side OR provincial
OR provincial OR rural community[Mesh]).

)R

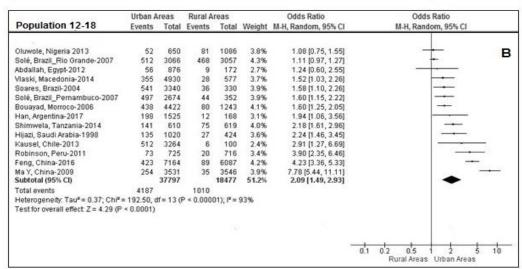
(urban indicators[tiab] OR urban poverty OR socioeconomic status OR urban deprivation OR socioeconomic factors OR deprived areas OR rural poverty[Mesh])

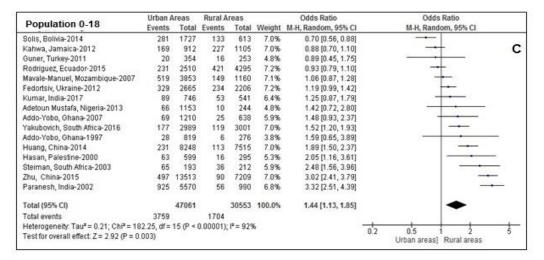
Supplementary Figure 2. Funnel Plots for asthma studies comparing populations living in urban versus rural areas by asthma definitions: (A) current wheeze, (B) wheeze ever, (C) doctor diagnosis, (D) exercise test, (E) self-reported asthma, and (F) asthma questionnaire.



Supplementary Figures 3. Forest Plot and unadjusted Odd Ratios for asthma comparing populations living in urban versus rural areas by populations groups: (A) 0 – 12 years, (B) 12-18 years and (C) 0-18 years.

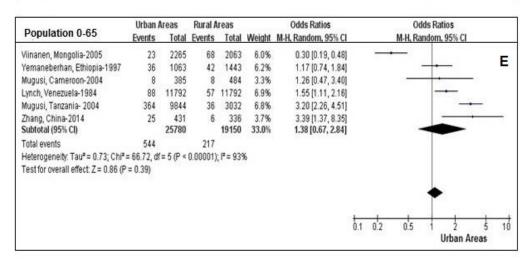
Population 0-12	Urban A	Areas	Rural Areas		Odds Ratio		Odds Ratio		
	Events	Total	Events	Total	Weight	M-H, Random, 95% CI	M-H, Random, 95% CI		
Bedolla-Barajas, Mexico-2017	77	814	19	189	3.3%	0.93 [0.55, 1.59]	A		
Zedan, Egipt-2009	154	1935	55	785	4.0%	1.15 [0.83, 1.58]			
Selcuk, Turkey-1994	228	3792	84	1620	4.1%	1.17 [0.90, 1.51]	+		
Cooper, Ecuador-2016	394	1458	141	611	4.2%	1.23 [0.99, 1.54]	-		
Selcuk, Turkey-2010	547	4345	135	1390	4.2%	1.34 [1.10, 1.63]	-		
El-Sharif, Palestine-2002	155	1565	136	1817	4.2%	1.36 [1.07, 1.73]	-		
Chakravarthy, India-2002	114	584	39	271	3.7%	1.44 [0.97, 2.14]			
Calvert, South Africa-2010	246	1671	146	1651	4.2%	1.78 [1.43, 2.21]			
Ng'ang'a, Kenya-1998	131	573	63	479	3.9%	1.96 [1.41, 2.72]	_ 		
Dagoye, Ethiopia-2003	188	4285	58	2570	4.0%	1.99 [1.47, 2.68]			
Yang, China 2015	388	5878	140	5598	4.2%	2.76 [2.26, 3.35]	-		
Odhiambo, Kenya-1998	54	568	15	604	3.2%	4.13 [2.30, 7.40]			
Van Niekerk, South Africa-1979	22	694	1	671	0.8%	21.93 [2.95, 163.19]			
Keeley, Zimbabwe-1991 Subtotal (95% CI)	62	1368 29530	1	687 18943	0.8% 48.8%	32.57 [4.51, 235.37] 1.70 [1.37, 2.11]	•		
Total events	2760		1033						
Heterogeneity: Tau2 = 0.12; Chi2:	= 84.30, df	= 13 (P	< 0.0000	1); [*= 8	5%				
Test for overall effect Z = 4.78 (P	< 0.00001)							



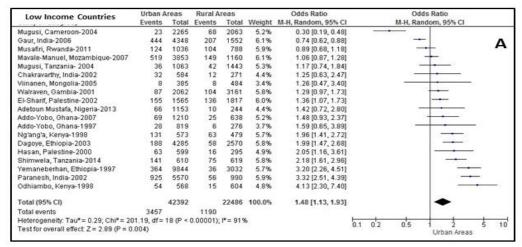


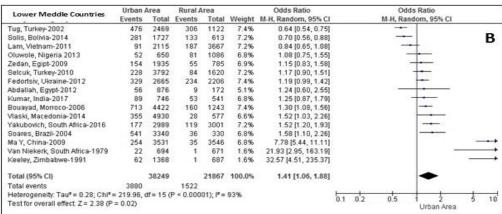
Supplementary Figures 4. Forest Plot and unadjusted Odd Ratios for asthma comparing populations living in urban versus rural areas by populations groups: (D) >18 years and (E) 0-65 years.

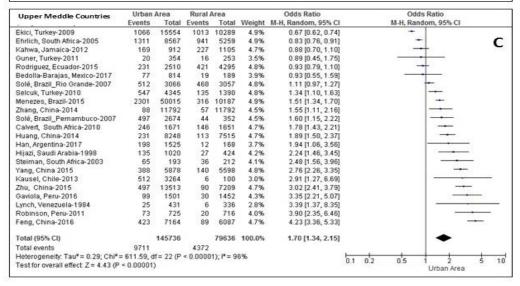
Population >18	Urban Areas Rural Areas			reas		Odds Ratios	Odds Ratios	
	Events	Total	Events	Total	Weight	M-H, Random, 95% CI	M-H, Random, 95% (1
	77.00							D
Tug, Turkey-2002	476	2469	306	1122	7.7%		•	
Gaur, India-2006	1066	15554	1013	10289	7.9%	0.67 [0.62, 0.74]	*	
Ekici, Turkey-2009	444	4348	207	1552	7.7%	0.74 [0.62, 0.88]	-	
Ehrlich, South Africa-2005	1311	8567	941	5259	7.9%	0.83 [0.76, 0.91]	+	
Gaviola, Peru-2016	91	2115	187	3667	7.3%	0.84 [0.65, 1.08]		
Menezes, Brazil-2015	124	1036	104	788	7.2%	0.89 [0.68, 1.18]		
Walraven, Gambia-2001	87	2062	104	3161	7.1%	1.29 [0.97, 1.73]	-	
Musafiri, Rwanda-2011	2301	50015	316	10187	7.8%	1.51 [1.34, 1.70]	***	
Lam, Vietnam-2011 Subtotal (95% CI)	99	1501 87667	30	1452 37477	6.4% 67.0%	3.35 [2.21, 5.07] 1.00 [0.78, 1.28]	•	100
Total events	5999		3208					
Heterogeneity: Tau2 = 0.13; Ch	ni²= 178.60, (f=8 (P	< 0.00001); F= 98	96			
Test for overall effect: Z = 0.02	(P = 0.98)							



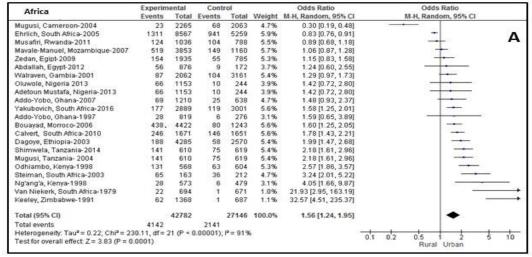
Supplementary Figures 5. Forest Plot and unadjusted Odd Ratios for asthma comparing populations living in urban versus rural areas by gross national income: (A) Low income countries, (B) Low meddle-income countries, and (C) Upper meddle-income countries.

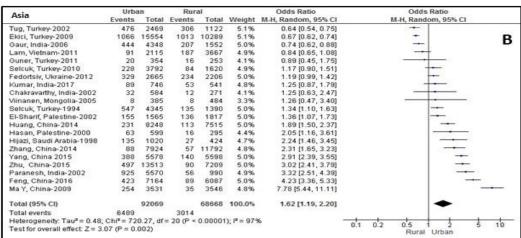






Supplementary Figures 6. Forest Plot and unadjusted Odd Ratios for asthma comparing populations living in urban versus rural areas by region: (A) African countries, (B) Asian countries, and (C) Latin American countries.





Latin America Solis, Bolivia-2014	Urban Rural			al		Odds Ratio	Odds Ratio			
	Events	Total	Events	Total	Weight	M-H, Random, 95% CI		M-H, Rand	om, 95% CI	
	281	1727	133	613	9.3%	0.70 [0.56, 0.88]		-		
Rodriguez, Ecuador-2015	231	2510	421	4295	9.8%	0.93 [0.79, 1.10]		-	+	(
Bedolla-Barajas, Mexico-2017	77	814	19	189	6.6%	0.93 [0.55, 1.59]		_	_	965
Solé, Brazil_Pernambuco-2007	512	3066	468	3057	9.9%	1.11 [0.97, 1.27]			-	
Cooper, Ecuador-2016	394	1458	141	611	9.4%	1.23 [0.99, 1.54]			-	
Menezes, Brazil-2015	2301	50015	316	10187	10.0%	1.51 [1.34, 1.70]			-	
Soares, Brazil-2004	541	3340	36	330	8.2%	1.58 [1.10, 2.26]			-	
Solé, Brazil_Rio Grande-2007	497	2674	44	352	8.4%	1.60 [1.15, 2.22]				
Han, Argentina-2017	198	1525	12	168	5.9%	1.94 [1.06, 3.56]			-	
Kausel, Chile-2013	512	3264	6	100	4.3%	2.91 [1.27, 6.69]			-	
Gaviola, Peru-2016	99	1501	30	1452	7.6%	3.35 [2.21, 5.07]			-	•
Lynch, Venezuela-1984	25	431	6	336	3.9%	3.39 [1.37, 8.35]			B:	•
Robinson, Peru-2011	73	725	20	716	6.8%	3.90 [2.35, 6.46]			100	•
Total (95% CI)		73050		22406	100.0%	1.52 [1.22, 1.90]			•	
Total events	5741		1652						100	
Heterogeneity: Tau2 = 0.13; Chi2:	105.11,	df = 12 (F	< 0.000	01); P=	89%	_	0.2	0.5	1 1	
Test for overall effect: Z = 3.67 (P = 0.0002)								Rural	Urban	2