

Webappendix Table 1. Characteristics of census tracts in 27 major Brazilian cities, according to socioeconomic quintile.

Characteristic	Socioeconomic quintile according to census tract characteristics*				
	A (highest)	B	C	D	E (lowest)
Average census tract head of household monthly income in US\$, median, IQR	1375 (958-1930)	617 (498-826)	382 (293-488)	255 (213-306)	194 (156-246)
% head of household with ≥ 17 years education	5.6 (3.7-10.0)	1.8 (1.1-2.6)	0.6 (0.5-1.0)	0.4 (0.3-0.6)	0.1 (0.1-0.2)
% head of household with income > 20 minimum wage	5.3 (3.4-9.8)	1.3 (0.7-2.9)	1.3 (0.7-2.9)	0.5 (0.3-0.9)	0.1 (0.3-0.0)

* Socioeconomic characteristics of census tracts were based on 2000 Brazilian census data. Socioeconomic quintiles were based on rank of census tract according to average head of household income, percent heads of household with 17 or more years of education and percent heads of household with income greater than 20 times the minimum wage. See Methods.

Webappendix Table 2. Description of survey sample in 27 Brazilian capital cities.

Region Capital, State	Registered births, 2005	Number of clusters selected	Number of census tracts sampled (% total)	Children enrolled (% target)	Average census tract head of household monthly income in US\$*, median, (IQR)	
Southeast						
São Paulo, SP	179025	150	275 (2.1)	778 (74.1)	1441	(147)
Rio de Janeiro, RJ	84228	150	247 (3.0)	765 (72.9)	1001	(130)
Vitória, ES	4324	90	134 (49.3)	418 (66.3)	1007	(126)
Belo Horizonte, MG	32097	150	118 (4.6)	941 (89.6)	984	(115)
South						
Curitiba, PR	24547	150	217 (10.3)	899 (85.6)	921	(141)
Florianópolis, SC	4961	90	132 (28.7)	531 (84.3)	1016	(179)
Porto Alegre, RS	18943	150	270 (12.6)	812 (77.3)	931	(161)
Central-west						
Brasília, DF	45917	150	211 (8.4)	998 (95.1)	1126	(110)
Goiânia, GO	19621	150	200 (18.6)	815 (77.6)	799	(106)
Cuiabá, MT	9601	90	118 (23.3)	548 (87.0)	735	(123)
Campo Grande, MS	12316	90	124 (18.4)	628 (99.7)	693	(99)
North						
Palmas, TO	3828	90	100 (80.7)	585 (92.9)	592	(101)
Belém, PA	23557	90	125 (10.6)	621 (98.6)	639	(91)
Manaus, AM	38022	90	122 (7.9)	625 (99.2)	586	(94)
Boa Vista, RR	6006	60	72 (28.8)	419 (99.8)	472	(109)
Macapá, AP	8422	60	61 (33.9)	380 (90.5)	475	(104)
Rio Branco, AC	7288	60	67 (30.9)	419 (99.8)	436	(88)
Porto Velho, RO	7670	60	82 (27.1)	420 (100)	538	(123)
Northeast						
Salvador, BA	37603	150	265 (10.6)	761 (72.5)	874	(92)
Aracaju, SE	9383	90	130 (25.9)	601 (95.4)	611	(117)
Recife, PE	23207	150	173 (14.4)	875 (83.3)	815	(74)
Maceió, AL	16513	90	130 (19.5)	603 (95.7)	504	(135)
João Pessoa, PB	11682	90	112 (19.2)	572 (90.8)	702	(76)
Natal, RN	13718	90	106 (19.5)	604 (95.9)	661	(84)
Fortaleza, CE	38905	150	258 (12.8)	1006 (95.9)	837	(81)
Teresina, PI	14290	90	98 (15.1)	564 (89.5)	522	(61)
São Luiz, MA	17836	90	89 (11.5)	561 (89.1)	608	(68)
Total	713510	2910	4009	17749 (87.1)	733	(103)

SP=São Paulo, RJ=Rio de Janeiro, ES=Espirito Santo, MG=Minas Gerais, PR=Paraná, SC=Santa Catarina, RS=Rio Grande do Sul, DF=Distrito Federal, GO=Goáís, MT=Mato Grosso, MS=Mato Grosso do Sul, TO=Tocantins, PA=Pará, AM=Amazonas, RR=Roraima, AP=Amapá, AC=Acre, RO=Roraima, BA=Bahia, SE=Sergipe, PE=Pernambuco, AL=Alagoas, PB=Paraíba, RN=Rio Grande do Norte, CE=Ceará, PI=Piauí, MA=Maranhão.

Webappendix Table 3. Percent of children who had received none, some or all of the recommended infant immunisations by 18 months of age, in 27 Brazilian capital cities, 2007-2008.

Variables	None of recommended vaccinations (N=123)	Incompletely immunised (N=2634)	Completely immunised (N=14538)
	% (n)	% (n)	% (n)
Gender of child			
Male	0.8 (58)	16.1 (1366)	83.1 (7433)
Female	0.7 (65)	16.6 (1267)	82.7 (7103)
Child's birth order			
1 st	0.7 (71)	14.2 (1088)	85.1 (7167)
2nd	0.7 (35)	17.0 (794)	82.4 (4337)
3rd or higher	0.8 (17)	20.3 (734)	78.9 (2990)
Socioeconomic quintile of residence census tract			
A-highest	1.0 (28)	21.4 (503)	77.5 (2271)
B-upper-middle	0.6 (32)	12.6 (434)	86.7 (2868)
C-middle	1.1 (22)	14.9 (498)	83.9 (3073)
D-lower-middle	0.7 (17)	16.2 (584)	83.1 (3122)
E-lowest	0.5 (24)	17.8 (615)	81.7 (3204)
Household economic classification (score)¹			
Highest (13 to 18)	0.9 (42)	15.2 (589)	83.9 (3882)
Upper-middle (9 to 12)	0.7 (29)	16.4 (561)	82.9 (3324)
Middle (6 to 8)	0.6 (23)	16.4 (688)	82.9 (3621)
Lower-middle (3 to 5)	0.7 (6)	19.8 (275)	79.5 (1155)
Lowest (0 to 2)	0.8 (23)	16.9 (521)	82.3 (2556)
Household crowding			
Yes (>1 person per room)	0.6 (38)	16.8 (1270)	82.5 (6399)
No	0.9 (84)	15.8 (1327)	83.3 (8030)
Presence of grandmother in household			
Yes	0.7 (46)	16.8 (847)	82.4 (4741)
No	0.8 (76)	15.2 (1778)	84.0 (9770)
Single parent household			
Yes	0.9 (82)	16.3 (1998)	82.8 (11126)
No	0.7 (39)	16.4 (627)	82.9 (3382)
Mother's education			
0 to 3 years	-	23.5 (158)	76.5 (523)
4 to 11 years	0.7 (81)	15.9 (1740)	83.3 (9574)
12 or more years	0.8 (39)	16.2 (702)	82.9 (4327)
Mother employed outside home			
Yes	1.0 (76)	16.2 (1107)	82.9 (6393)
No	0.6 (46)	16.5 (1516)	82.9 (8095)

¹ According to the Brazilian Economic Classification Criteria.

Webappendix Table 4. Results of stratified analysis of factors associated with incomplete vaccination by 18 months of age, by socioeconomic quintile of residence census tract in 27 Brazilian capitals cities, 2007-2008.

Factors	Socioeconomic quintile of residence census tract									
	A highest		B upper middle		C middle		D lower middle		E lowest	
	Incomplete	aOR ¹	Incomplete	aOR ¹	Incomplete	aOR ¹	Incomplete	aOR ¹	Incomplete	aOR ¹
Household economic classification (score)²										
Highest (13 to 18)	18.3	1.0	10.3	1.0	9.7	1.0	9.9	1.0	11.6	1.0
Upper-middle (9 to 12)	16.5	0.9	13.1	1.2	14.7	1.6*	13.8	1.0	14.9	1.6
Middle (6 to 8)	19.0	1.0	13.2	1.7*	15.9	1.1	16.7	1.2	16.1	1.3
Lower-middle (3 to 5)	18.8	0.8	16.4	2.0	17.6	1.1	23.7	2.0*	17.3	1.1
Lowest (0 to 2)	18.5	0.8	18.5	1.8*	14.2	1.3	16.1	1.0	18.2	1.3
Household crowding										
Yes	18.5	0.8	14.7	0.7*	12.7	1.1	17.8	1.2	17.1	1.1
No	18.0	1.0	12.1	1.0	15.1	1.0	13.3	1.0	14.4	1.0
Presence of grandmother in household										
Yes	16.1	1.0	12.7	1.0	14.3	1.0	17.2	1.0	15.6	1.0
No	18.8	1.2	13.3	1.0	13.8	1.0	15.1	0.9	16.3	1.2
Mother's education										
0 to 3 years	18.9	0.9	28.0	1.5	23.5	1.2	23.3	1.0	22.1	1.7
4 to 11 years	16.4	0.7	13.8	0.9	14.6	1.1	16.0	1.1	16.1	1.0
12 or more years	18.9	1.0	11.2	1.0	11.1	1.0	12.1	1.0	12.3	1.0
Child's birth order										
1 st	16.6	1.0	10.5	1.0	12.8	1.0	12.7	1.0	13.6	1.0
2 nd	19.0	1.4	14.3	1.4	12.0	1.1	16.6	1.6*	16.0	1.0
3rd or higher	21.5	1.4	18.5	2.2*	19.2	1.6*	20.2	1.6*	19.7	1.0

Note. aOR = adjusted Odds Ratio, *p<0.05.

¹ Adjusted Odds Ratios from five logistic regression models (one for each socioeconomic quintile of residence census tract) comparing incompletely vaccinated children to completely vaccinated children and including the independent variables shown in the table. Children who had received none of the recommended vaccines were excluded.

² According to the Brazilian Economic Classification Criteria.