

Supplemental Table 1: Demographic Characteristics of Cases and Total Live Births, 1999-2007

Variable	All observations				Children to US born mothers				Children to Foreign born mothers			
	Cases		Denominator		Cases		Denominator		Cases		Denominator	
	Count	(%)*	Count	(%)*	Count	(%)	Count	(%)	Count	(%)	Count	(%)
Maternal Race/Ethnicity												
Non-Hispanic White	104,727	(60.8)	6,964,706	(53.8)	99,126	(72.2)	6,485,667	(67.6)	5,601	(16.0)	479,039	(14.2)
Non-Hispanic Black	22,578	(13.1)	1,815,652	(14.0)	20,054	(14.6)	1,561,600	(16.3)	2,524	(7.2)	254,052	(7.6)
Hispanic	40,359	(23.4)	3,685,157	(28.4)	17,602	(12.8)	1,493,131	(15.6)	22,757	(65.1)	2,192,026	(65.2)
Non-Hispanic Asian or Pacific Islander	4,571	(2.7)	488,854	(3.8)	513	(0.4)	51,343	(0.5)	4,058	(11.6)	437,511	(13.0)
Maternal Age												
Missing Maternal Age	29		1,116		22	(0.0)	819	(0.0)	7	(0.0)	297	(0.0)
<20	19,088	(11.1)	1,411,340	(10.9)	16,261	(11.8)	1,138,477	(11.9)	2,827	(8.1)	272,863	(8.1)
20-34	122,877	(71.4)	9,662,266	(74.6)	98,011	(71.4)	7,087,154	(73.9)	24,866	(71.2)	2,575,112	(76.6)
35+	30,241	(17.6)	1,879,647	(14.5)	23,001	(16.8)	1,365,291	(14.2)	7,240	(20.7)	514,356	(15.3)
Child Sex												
Missing/Unknown/Not stated Child Sex	81		226		59	(0.0)	168	(0.0)	22	(0.1)	58	(0.0)
Male	116,239	(67.5)	6,628,457	(51.2)	93,376	(68.0)	4,907,396	(51.2)	22,863	(65.4)	1,721,061	(51.2)
Female	55,915	(32.5)	6,325,686	(48.8)	43,860	(31.9)	4,684,177	(48.8)	12,055	(34.5)	1,641,509	(48.8)
State												
Arizona	8,131	(4.7)	749,680	(5.8)	5,518	(4.0)	502,265	(5.2)	2,613	(7.5)	247,415	(7.4)
Colorado	8,622	(5.0)	604,549	(4.7)	7,012	(5.1)	464,379	(4.8)	1,610	(4.6)	140,170	(4.2)
Florida	24,008	(13.9)	1,910,251	(14.7)	18,384	(13.4)	1,334,834	(13.9)	5,624	(16.1)	575,417	(17.1)
Illinois	11,932	(6.9)	1,641,556	(12.7)	9,240	(6.7)	1,228,270	(12.8)	2,692	(7.7)	413,286	(12.3)
Massachusetts	4,005	(2.3)	595,202	(4.6)	3,074	(2.2)	444,807	(4.6)	931	(2.7)	150,395	(4.5)
Michigan	34,946	(20.3)	1,157,438	(8.9)	31,165	(22.7)	1,035,385	(10.8)	3,781	(10.8)	122,053	(3.6)
North Carolina	6,735	(3.9)	594,571	(4.6)	5,658	(4.1)	487,041	(5.1)	1,077	(3.1)	107,530	(3.2)
Nebraska	10,827	(6.3)	210,439	(1.6)	9,925	(7.2)	188,013	(2.0)	902	(2.6)	22,426	(0.7)
New Jersey	10,425	(6.1)	979,992	(7.6)	7,140	(5.2)	641,727	(6.7)	3,285	(9.4)	338,265	(10.1)
New York	13,927	(8.1)	1,148,065	(8.9)	11,945	(8.7)	922,946	(9.6)	1,982	(5.7)	225,119	(6.7)
Texas	38,677	(22.5)	3,362,626	(26.0)	28,234	(20.6)	2,342,074	(24.4)	10,443	(29.9)	1,020,552	(30.3)
Total	172,235	(100)	12,954,369	(100)	137,295	(100)	9,591,741	(100)	34,940	(100)	3,362,628	(100)

%=Percent

Notes

*Percent within each demographic variable does not include missing values for the category 'All Observations.'

Supplemental Table 2: Crude Prevalence Ratios of Selected Birth Defects for Maternal Nativity by Maternal Race/Ethnicity, 1999-2007

Defect	Non-Hispanic White foreign born*	Hispanic (total) foreign born*	Hispanic (Mexican) foreign born*	Non-Hispanic Black foreign born*	Non-Hispanic Asian/Pacific Islander foreign born*
	PR (95% CI*)	PR (95% CI*)	PR (95% CI*)	PR (95% CI*)	PR (95% CI*)
Central Nervous System					
Anencephalus	0.8 (0.5-1.1)	1.1 (0.9-1.3)	1.1 (0.9-1.4)	0.5 (0.3-0.9) ↓	0.8 (0.3-2.2)
Spina Bifida without anencephalus	0.7 (0.6-0.9) ↓	1.2 (1.1-1.3) ↑	1.3 (1.1-1.5) ↑	0.8 (0.6-1.1)	1.3 (0.5-3.2)
Encephalocele	0.9 (0.6-1.3)	1.1 (0.9-1.4)	1.3 (1.0-1.7)	0.5 (0.3-0.9) ↓	1.0 (0.2-4.3)
Ear					
Anotia/microtia	1.1 (0.9-1.5)	1.1 (1.0-1.3)	1.2 (1.0-1.3)	1.0 (0.6-1.7)	0.6 (0.3-1.1)
Cardiovascular					
Aortic valve stenosis	0.7 (0.6-0.9) ↓	0.8 (0.7-1.0)	0.8 (0.7-1.0)	1.1 (0.7-1.6)	1.6 (0.6-4.5)
Atrioventricular septal defect (Endocardial cushion defect) †	0.8 (0.7-0.9) ↓	1.0 (0.9-1.1)	1.0 (0.8-1.1)	1.3 (1.1-1.6) ↑	0.7 (0.4-1.2)
Atrioventricular septal defect (Endocardial cushion defect), without Down syndrome †	0.8 (0.6-1.1)	0.9 (0.8-1.0)	0.9 (0.7-1.0)	0.9 (0.7-1.2)	0.7 (0.3-1.5)
Coarctation of aorta	0.9 (0.7-1.0)	0.9 (0.8-1.0)	0.9 (0.8-1.0)	1.2 (1.0-1.5)	1.7 (0.9-3.3)
Common truncus	0.7 (0.5-1.0)	0.8 (0.6-1.0)	0.8 (0.6-1.0)	1.0 (0.7-1.6)	1.2 (0.2-9.2)
Hypoplastic left heart syndrome	0.8 (0.7-1.0)	1.0 (0.9-1.1)	1.0 (0.9-1.3)	0.9 (0.7-1.2)	0.9 (0.4-1.9)
Tetralogy of Fallot	0.8 (0.6-0.9) ↓	0.9 (0.8-1.1)	0.9 (0.8-1.0)	1.0 (0.8-1.2)	0.8 (0.5-1.2)
Transposition of great arteries	0.8 (0.7-1.0)	1.0 (0.9-1.1)	1.0 (0.8-1.1)	1.1 (0.9-1.4)	0.6 (0.4-1.0)
Orofacial					
Cleft lip with and without cleft palate	0.7 (0.6-0.8) ↓	0.9 (0.9-1.0)	0.9 (0.8-1.0)	0.8 (0.6-0.9) ↓	0.8 (0.6-1.0)
Cleft palate alone	0.7 (0.6-0.8) ↓	0.9 (0.8-1.0)	0.9 (0.8-1.0)	0.8 (0.6-1.0)	1.6 (1.0-2.7)
Gastrointestinal					
Congenital hypertrophic pyloric stenosis †	0.5 (0.4-0.5) ↓	0.7 (0.7-0.7) ↓	0.7 (0.6-0.7) ↓	0.7 (0.6-0.9) ↓	0.7 (0.5-1.1)
Esophageal atresia	0.9 (0.7-1.1)	0.9 (0.8-1.1)	0.9 (0.8-1.1)	1.1 (0.9-1.5)	0.9 (0.4-1.9)
Rectal and large intestinal atresia †	0.7 (0.6-0.8) ↓	0.9 (0.9-1.0)	0.9 (0.8-1.0)	0.8 (0.7-1.0)	1.0 (0.6-1.5)
Genitourinary					
Hypospadias †,§	0.9 (0.8-0.9) ↓	0.7 (0.6-0.7) ↓	0.6 (0.5-0.6) ↓	1.0 (1.0-1.1)	0.9 (0.7-1.1)
Musculoskeletal					
Upper limb deficiency	0.6 (0.5-0.8) ↓	0.8 (0.7-0.9) ↓	0.9 (0.8-1.0)	0.8 (0.6-1.0)	1.1 (0.6-2.2)
Lower limb deficiency	0.8 (0.6-1.0)	0.9 (0.7-1.0)	0.9 (0.7-1.1)	0.8 (0.5-1.1)	1.9 (0.6-6.0)
Any limb deficiency	0.7 (0.6-0.8) ↓	0.8 (0.7-0.9) ↓	0.9 (0.8-1.0)	0.8 (0.6-1.0)	1.3 (0.7-2.5)
Gastroschisis ¶	0.5 (0.4-0.6) ↓	0.5 (0.4-0.5) ↓	0.5 (0.4-0.5) ↓	0.4 (0.3-0.7) ↓	0.2 (0.1-0.4) ↓
Omphalocele ¶,**	0.6 (0.4-0.9) ↓	0.8 (0.7-1.0)	0.8 (0.7-1.0)	1.2 (0.8-1.8)	0.5 (0.2-1.2)
Diaphragmatic hernia	0.7 (0.6-0.9) ↓	1.0 (0.9-1.2)	1.1 (1.0-1.3)	1.0 (0.7-1.3)	0.8 (0.5-1.5)
Chromosomal					
Trisomy 13	0.9 (0.6-1.2)	1.1 (0.9-1.4)	1.0 (0.8-1.3)	1.6 (1.1-2.2) ↑	1.2 (0.4-4.0)
Trisomy 21 (Down syndrome)	0.9 (0.8-1.0)	1.4 (1.3-1.5) ↑	1.4 (1.3-1.5) ↑	1.8 (1.6-2.0) ↑	0.9 (0.7-1.3)
Trisomy 18	1.1 (0.8-1.4)	1.1 (0.9-1.3)	1.2 (1.0-1.5)	2.0 (1.6-2.5) ↑	1.0 (0.5-2.2)

PR=Prevalence Ratio

Notes

*95% CI for prevalence ratio calculated by SAS GENMOD (Wald 95% CI). Reference group is US-born in each race/ethnic group.

Defect	Non-Hispanic White foreign born* PR (95% CI*)	Hispanic (total) foreign born* PR (95% CI*)	Hispanic (Mexican) foreign born* PR (95% CI*)	Non-Hispanic Black foreign born* PR (95% CI*)	Non-Hispanic Asian/Pacific Islander foreign born* PR (95% CI*)
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† Arizona data excludes years 2005-2007

§ Prevalence per 10,000 male live births

¶ Excludes Michigan

** Excludes Florida