

Tables 8a-g: Risk Model Estimates using Adjusted Model

Table 8a. Risk Estimate Adjusted Model- Bronchopulmonary Dysplasia								
	Estimate	Std Dev	P-Value	Estimate LCL	Estimate UCL	OR	OR LCL	OR UCL
Intercept	-2.8804	0.0515	<.0001	-2.9814	-2.7795			
Gestational Age (Reference Group: >=30 Weeks)								
23-24	2.0056	0.0444	<.0001	1.9186	2.0925	7.43	6.811	8.105
25-26	2.4121	0.0417	<.0001	2.3304	2.4938	11.157	10.282	12.107
27-28	1.8514	0.0413	<.0001	1.7705	1.9323	6.369	5.874	6.905
29-30	0.8613	0.0435	<.0001	0.776	0.9467	2.366	2.173	2.577
Male	0.1826	0.0186	<.0001	0.1461	0.219	1.2	1.157	1.245
Maternal Race/Ethnicity (Reference Group: White, Non-Hispanic)								
Black	-0.0685	0.0261	0.0086	-0.1197	-0.0174	0.934	0.887	0.983
Hispanic	-0.11	0.0251	<.0001	-0.1592	-0.0608	0.896	0.853	0.941
Asian/ Pacific Islander	-0.1125	0.0328	0.0006	-0.1769	-0.0481	0.894	0.838	0.953
Maternal Age Group (Reference Group: 18-35 Years)								
< 18	-0.0775	0.0454	0.0881	-0.1665	0.0116	0.925	0.847	1.012
> 35	-0.0269	0.0265	0.31	-0.0788	0.025	0.973	0.924	1.025
Maternal Education (Reference Group: High School Diploma/GED)								
No High School	-0.0114	0.0421	0.7866	-0.0939	0.0711	0.989	0.91	1.074
Some High School	-0.00746	0.0293	0.7988	-0.0648	0.0499	0.993	0.937	1.051
At Least Some College	-0.00274	0.0227	0.9043	-0.0473	0.0418	0.997	0.954	1.043
Source of Payment (Reference Group: FFS)								
HMO	-0.0985	0.0345	0.0043	-0.1662	-0.0308	0.906	0.847	0.97
Federal	-0.0428	0.0375	0.2534	-0.1164	0.0307	0.958	0.89	1.031
Federal MC	-0.126	0.0418	0.0026	-0.2079	-0.0441	0.882	0.812	0.957
Other MC	0.2396	0.1626	0.1407	-0.0791	0.5583	1.271	0.924	1.748
Other	-0.1799	0.0438	<.0001	-0.2656	-0.0941	0.835	0.767	0.91
Uninsured	-0.2424	0.0969	0.0124	-0.4323	-0.0525	0.785	0.649	0.949
Data Description: CA hospital data 1995-2009								
CL- Confidence Limit								

Table 8b. Risk Estimate Adjusted Model- Necrotizing Enterocolitis								
	Estimate	Std Dev	P-Value	Estimate LCL	Estimate UCL	OR	OR LCL	OR UCL
Intercept	-3.4593	0.073	<.0001	-3.6024	-3.3163			
Gestational Age (Reference Group: >=30 Weeks)								
23-24	0.792	0.0584	<.0001	0.6777	0.9064	2.208	1.969	2.475
25-26	0.9881	0.0525	<.0001	0.8852	1.0909	2.686	2.424	2.977
27-28	0.7703	0.0515	<.0001	0.6694	0.8711	2.16	1.953	2.39
29-30	0.3887	0.0533	<.0001	0.2843	0.4931	1.475	1.329	1.637
Male	0.0581	0.0287	0.043	0.00183	0.1143	1.06	1.002	1.121
Maternal Race/Ethnicity (Reference Group: White, Non-Hispanic)								
Black	0.2087	0.0398	<.0001	0.1308	0.2867	1.232	1.14	1.332
Hispanic	0.1953	0.0383	<.0001	0.1202	0.2703	1.216	1.128	1.31
Asian/ Pacific Islander	0.026	0.0523	0.6196	-0.0766	0.1285	1.026	0.926	1.137
Maternal Age Group (Reference Group: 18-35 Years)								
< 18	-0.0299	0.0671	0.656	-0.1613	0.1015	0.971	0.851	1.107
> 35	0.00267	0.0414	0.9486	-0.0784	0.0837	1.003	0.925	1.087
Maternal Education (Reference Group: High School Diploma/GED)								
No High School	0.0662	0.0618	0.2841	-0.055	0.1874	1.068	0.947	1.206
Some High School	0.0817	0.0434	0.0599	-0.00339	0.1667	1.085	0.997	1.181
At Least Some College	-0.0382	0.0358	0.2856	-0.1083	0.0319	0.963	0.897	1.032
Source of Payment (Reference Group: FFS)								
HMO	0.0313	0.0578	0.5875	-0.0819	0.1446	1.032	0.921	1.156
Federal	0.1053	0.0615	0.0872	-0.0154	0.2259	1.111	0.985	1.253
Federal MC	0.2441	0.0659	0.0002	0.115	0.3732	1.276	1.122	1.452
Other MC	0.2309	0.2585	0.3716	-0.2757	0.7375	1.26	0.759	2.091
Other	-0.0247	0.0722	0.7327	-0.1661	0.1168	0.976	0.847	1.124
Uninsured	-0.1684	0.1603	0.2933	-0.4825	0.1457	0.845	0.617	1.157
Data Description: CA hospital data 1995-2009								
CL- Confidence Limit								

Table 8c. Risk Estimate Adjusted Model- Any retinopathy of prematurity								
	Estimate	Std Dev	P-Value	Estimate LCL	Estimate UCL	OR	OR LCL	OR UCL
Intercept	-2.8026	0.0486	<.0001	-2.8979	-2.7072			
Gestational Age (Reference Group: >=30 Weeks)								
23-24	0.946	0.0376	<.0001	0.8722	1.0197	2.575	2.392	2.772
25-26	1.4604	0.0332	<.0001	1.3953	1.5255	4.308	4.036	4.597
27-28	1.1152	0.0323	<.0001	1.0518	1.1785	3.05	2.863	3.249
29-30	0.5243	0.0334	<.0001	0.4589	0.5897	1.689	1.582	1.804
Male	-0.1234	0.0182	<.0001	-0.159	-0.0878	0.884	0.853	0.916
Maternal Race/Ethnicity (Reference Group: White, Non-Hispanic)								
Black	-0.1104	0.0276	<.0001	-0.1646	-0.0563	0.895	0.848	0.945
Hispanic	0.5225	0.0237	<.0001	0.4761	0.5689	1.686	1.61	1.766
Asian/ Pacific Islander	0.3228	0.0304	<.0001	0.2632	0.3824	1.381	1.301	1.466
Maternal Age Group (Reference Group: 18-35 Years)								
< 18	-0.1086	0.0462	0.0187	-0.1992	-0.018	0.897	0.819	0.982
> 35	0.1706	0.0248	<.0001	0.122	0.2191	1.186	1.13	1.245
Maternal Education (Reference Group: High School Diploma/GED)								
No High School	0.0692	0.0387	0.0737	-0.00663	0.1451	1.072	0.993	1.156
Some High School	-0.0201	0.029	0.489	-0.077	0.0368	0.98	0.926	1.038
At Least Some College	0.0693	0.0226	0.0021	0.0251	0.1135	1.072	1.025	1.12
Source of Payment (Reference Group: FFS)								
HMO	0.5791	0.039	<.0001	0.5027	0.6555	1.784	1.653	1.926
Federal	0.4727	0.0418	<.0001	0.3908	0.5545	1.604	1.478	1.741
Federal MC	0.2637	0.0464	<.0001	0.1727	0.3546	1.302	1.189	1.426
Other MC	0.3759	0.1766	0.0333	0.0297	0.7221	1.456	1.03	2.059
Other	0.0891	0.0496	0.0724	-0.00811	0.1862	1.093	0.992	1.205
Uninsured	0.1592	0.1011	0.1153	-0.0389	0.3574	1.173	0.962	1.43
Data Description: CA hospital data 1995-2009								
CL- Confidence Limit								

Table 8d. Risk Estimate Adjusted Model- Surgical Procedure for Retinopathy of prematurity								
	Estimate	Std Dev	P-Value	Estimate LCL	Estimate UCL	OR	OR LCL	OR UCL
Intercept	-6.0688	0.1691	<.0001	-6.4002	-5.7373			
Gestational Age (Reference Group: >=30 Weeks)								
23-24	3.4967	0.1491	<.0001	3.2045	3.789	33.008	24.642	44.213
25-26	3.2376	0.1482	<.0001	2.9471	3.5281	25.473	19.051	34.061
27-28	2.0148	0.1522	<.0001	1.7165	2.3131	7.5	5.565	10.106
29-30	0.7456	0.1666	<.0001	0.419	1.0722	2.108	1.52	2.922
Male	0.00913	0.0412	0.8246	-0.0716	0.0899	1.009	0.931	1.094
Maternal Race/Ethnicity (Reference Group: White, Non-Hispanic)								
Black	-0.5918	0.0704	<.0001	-0.7298	-0.4538	0.553	0.482	0.635
Hispanic	0.3237	0.0522	<.0001	0.2214	0.4261	1.382	1.248	1.531
Asian/ Pacific Islander	0.2756	0.066	<.0001	0.1461	0.405	1.317	1.157	1.499
Maternal Age Group (Reference Group: 18-35 Years)								
< 18	0.0336	0.1001	0.737	-0.1626	0.2298	1.034	0.85	1.258
> 35	0.0457	0.057	0.4231	-0.0661	0.1575	1.047	0.936	1.171
Maternal Education (Reference Group: High School Diploma/GED)								
No High School	0.0125	0.0857	0.8845	-0.1556	0.1805	1.013	0.856	1.198
Some High School	-0.0971	0.0668	0.1461	-0.2281	0.0338	0.907	0.796	1.034
At Least Some College	0.0893	0.0508	0.079	-0.0103	0.189	1.093	0.99	1.208
Source of Payment (Reference Group: FFS)								
HMO	0.3849	0.0854	<.0001	0.2175	0.5523	1.469	1.243	1.737
Federal	0.2523	0.0918	0.006	0.0724	0.4322	1.287	1.075	1.541
Federal MC	0.0673	0.1051	0.5218	-0.1386	0.2733	1.07	0.871	1.314
Other MC	0.2729	0.376	0.4679	-0.464	1.0099	1.314	0.629	2.745
Other	-0.1072	0.1123	0.3396	-0.3274	0.1129	0.898	0.721	1.119
Uninsured	-0.0783	0.23	0.7334	-0.5291	0.3724	0.925	0.589	1.451
Data Description: CA hospital data 1995-2009								
CL- Confidence Limit								

Table 8e. Risk Estimate Adjusted Model- Any intraventricular hemorrhage								
	Estimate	Std Dev	P-Value	Estimate LCL	Estimate UCL	OR	OR LCL	OR UCL
Intercept	-2.4131	0.0466	<.0001	-2.5044	-2.3218			
Gestational Age (Reference Group: >=30 Weeks)								
23-24	1.4058	0.0365	<.0001	1.3343	1.4773	4.079	3.797	4.381
25-26	1.2758	0.0342	<.0001	1.2087	1.3429	3.582	3.349	3.83
27-28	0.8191	0.0338	<.0001	0.7529	0.8854	2.269	2.123	2.424
29-30	0.3328	0.0351	<.0001	0.264	0.4015	1.395	1.302	1.494
Male	0.1637	0.0189	<.0001	0.1267	0.2007	1.178	1.135	1.222
Maternal Race/Ethnicity (Reference Group: White, Non-Hispanic)								
Black	-0.0335	0.0267	0.2103	-0.0858	0.0189	0.967	0.918	1.019
Hispanic	0.0367	0.0253	0.1468	-0.0129	0.0863	1.037	0.987	1.09
Asian/ Pacific Islander	-0.0153	0.033	0.642	-0.08	0.0493	0.985	0.923	1.051
Maternal Age Group (Reference Group: 18-35 Years)								
< 18	0.0374	0.0453	0.4091	-0.0514	0.1261	1.038	0.95	1.134
> 35	-0.0654	0.0271	0.0158	-0.1186	-0.0123	0.937	0.888	0.988
Maternal Education (Reference Group: High School Diploma/GED)								
No High School	-0.0279	0.0428	0.5141	-0.1117	0.0559	0.972	0.894	1.058
Some High School	0.0171	0.0297	0.5645	-0.0411	0.0753	1.017	0.96	1.078
At Least Some College	0.0511	0.0232	0.0277	0.00561	0.0965	1.052	1.006	1.101
Source of Payment (Reference Group: FFS)								
HMO	0.0384	0.0362	0.2882	-0.0325	0.1094	1.039	0.968	1.116
Federal	0.0502	0.0392	0.2002	-0.0266	0.1271	1.052	0.974	1.136
Federal MC	0.1234	0.0429	0.0041	0.0393	0.2076	1.131	1.04	1.231
Other MC	0.0619	0.1756	0.7244	-0.2823	0.4061	1.064	0.754	1.501
Other	-0.0449	0.0456	0.3238	-0.1342	0.0443	0.956	0.874	1.045
Uninsured	-0.1892	0.1021	0.0639	-0.3894	0.0109	0.828	0.677	1.011
Data Description: CA hospital data 1995-2009								
CL- Confidence Limit								

Table 8f. Risk Estimate Adjusted Model- Intraventricular hemorrhage grades 3 & 4								
	Estimate	Std Dev	P-Value	Estimate LCL	Estimate UCL	OR	OR LCL	OR UCL
Intercept	-5.1022	0.1557	<.0001	-5.4073	-4.7971			
Gestational Age (Reference Group: >=30 Weeks)								
23-24	3.1431	0.1265	<.0001	2.8951	3.391	23.175	18.086	29.696
25-26	2.6075	0.1263	<.0001	2.3599	2.855	13.565	10.59	17.375
27-28	1.8333	0.1284	<.0001	1.5816	2.085	6.255	4.863	8.045
29-30	0.888	0.1366	<.0001	0.6202	1.1558	2.43	1.859	3.177
Male	0.317	0.0423	<.0001	0.2342	0.3998	1.373	1.264	1.492
Maternal Race/Ethnicity (Reference Group: White, Non-Hispanic)								
Black	-0.0992	0.0603	0.0997	-0.2174	0.0189	0.906	0.805	1.019
Hispanic	0.056	0.0542	0.302	-0.0503	0.1623	1.058	0.951	1.176
Asian/ Pacific Islander	-0.1066	0.0743	0.1515	-0.2523	0.0391	0.899	0.777	1.04
Maternal Age Group (Reference Group: 18-35 Years)								
< 18	0.1346	0.0978	0.1689	-0.0572	0.3264	1.144	0.944	1.386
> 35	-0.1501	0.0614	0.0144	-0.2704	-0.0298	0.861	0.763	0.971
Maternal Education (Reference Group: High School Diploma/GED)								
No High School	0.0262	0.0935	0.779	-0.157	0.2094	1.027	0.855	1.233
Some High School	0.0178	0.0646	0.7827	-0.1088	0.1445	1.018	0.897	1.155
At Least Some College	0.0222	0.0516	0.6668	-0.0789	0.1233	1.022	0.924	1.131
Source of Payment (Reference Group: FFS)								
HMO	0.0645	0.0959	0.5017	-0.1236	0.2525	1.067	0.884	1.287
Federal	0.1379	0.102	0.1765	-0.0621	0.3379	1.148	0.94	1.402
Federal MC	0.0462	0.1061	0.663	-0.1617	0.2542	1.047	0.851	1.289
Other MC	-0.2145	0.3794	0.5718	-0.9582	0.5292	0.807	0.384	1.698
Other	0.05	0.1133	0.6592	-0.1721	0.272	1.051	0.842	1.313
Uninsured	-0.2999	0.3587	0.4031	-1.0029	0.4031	0.741	0.367	1.496
Data Description: CA hospital data 1995-2009								
CL- Confidence Limit								

Table 8g. Risk Estimate Adjusted Model- Any infection								
	Estimate	Std Dev	P-Value	Estimate LCL	Estimate UCL	OR	OR LCL	OR UCL
Intercept	-1.4789	0.0356	<.0001	-1.5486	-1.4092			
Gestational Age (Reference Group: >=30 Weeks)								
23-24	0.8724	0.0286	<.0001	0.8163	0.9285	2.393	2.262	2.531
25-26	1.2097	0.0257	<.0001	1.1593	1.26	3.352	3.188	3.526
27-28	0.8326	0.0242	<.0001	0.7852	0.88	2.299	2.193	2.411
29-30	0.3932	0.0242	<.0001	0.3458	0.4406	1.482	1.413	1.554
Male	0.0504	0.015	0.0008	0.021	0.0798	1.052	1.021	1.083
Maternal Race/Ethnicity (Reference Group: White, Non-Hispanic)								
Black	0.00466	0.0214	0.8278	-0.0373	0.0467	1.005	0.963	1.048
Hispanic	0.3365	0.0201	<.0001	0.2971	0.3759	1.4	1.346	1.456
Asian/ Pacific Islander	0.0705	0.0261	0.0069	0.0193	0.1217	1.073	1.02	1.129
Maternal Age Group (Reference Group: 18-35 Years)								
< 18	-0.034	0.037	0.3577	-0.1066	0.0385	0.967	0.899	1.039
> 35	0.0285	0.0212	0.1785	-0.013	0.07	1.029	0.987	1.073
Maternal Education (Reference Group: High School Diploma/GED)								
No High School	-0.0734	0.0338	0.03	-0.1397	-0.00711	0.929	0.87	0.993
Some High School	0.0248	0.0237	0.2965	-0.0217	0.0712	1.025	0.979	1.074
At Least Some College	0.0528	0.0185	0.0043	0.0166	0.0891	1.054	1.017	1.093
Source of Payment (Reference Group: FFS)								
HMO	0.1805	0.0293	<.0001	0.1231	0.2378	1.198	1.131	1.268
Federal	0.2113	0.0317	<.0001	0.1492	0.2734	1.235	1.161	1.314
Federal MC	0.4415	0.0347	<.0001	0.3736	0.5095	1.555	1.453	1.664
Other MC	0.2154	0.1413	0.1274	-0.0616	0.4924	1.24	0.94	1.636
Other	0.0975	0.0365	0.0076	0.0259	0.1691	1.102	1.026	1.184
Uninsured	-0.4806	0.0859	<.0001	-0.6491	-0.3122	0.618	0.523	0.732
Data Description: CA hospital data 1995-2009								
CL- Confidence Limit								

Tables 9a-g: Risk Model Estimates using Adjusted Model with maternal medical conditions

Table 9a. Risk Estimate Adjusted Model with maternal medical conditions- Bronchopulmonary dysplasia								
	Estimate	Std Dev	P-Value	Estimate LCL	Estimate UCL	OR	OR LCL	OR UCL
Intercept	-2.9379	0.0527	<.0001	-3.0413	-2.8345			
Gestational Age (Reference Group: >=30 Weeks)								
23-24	2.05	0.0452	<.0001	1.9613	2.1387	7.768	7.109	8.488
25-26	2.449	0.0423	<.0001	2.3661	2.532	11.577	10.656	12.579
27-28	1.8795	0.0416	<.0001	1.7978	1.9611	6.55	6.037	7.107
29-30	0.8778	0.0437	<.0001	0.7922	0.9634	2.406	2.208	2.621
Male	0.1866	0.0186	<.0001	0.1502	0.2231	1.205	1.162	1.25
Maternal Medical Conditions								
Diabetes	-0.017	0.0468	0.7165	-0.1088	0.0748	0.983	0.897	1.078
Hypertension	0.1356	0.0254	<.0001	0.0859	0.1853	1.145	1.09	1.204
Maternal Race/Ethnicity (Reference Group: White, Non-Hispanic)								
Black	-0.0734	0.0261	0.005	-0.1246	-0.0222	0.929	0.883	0.978
Hispanic	-0.111	0.0251	<.0001	-0.1602	-0.0617	0.895	0.852	0.94
Asian/ Pacific Islander	-0.1111	0.0329	0.0007	-0.1756	-0.0466	0.895	0.839	0.954
Maternal Age Group (Reference Group: 18-35 Years)								
< 18	-0.0712	0.0455	0.1177	-0.1603	0.018	0.931	0.852	1.018
> 35	-0.0329	0.0266	0.2162	-0.085	0.0192	0.968	0.919	1.019
Maternal Education (Reference Group: High School Diploma/GED)								
No High School	-0.00801	0.0421	0.8491	-0.0905	0.0745	0.992	0.913	1.077
Some High School	-0.00371	0.0293	0.8992	-0.0611	0.0537	0.996	0.941	1.055
At Least Some College	-0.00443	0.0228	0.8456	-0.049	0.0402	0.996	0.952	1.041
Source of Payment (Reference Group: FFS)								
HMO	-0.0965	0.0345	0.0052	-0.1642	-0.0288	0.908	0.849	0.972
Federal	-0.0375	0.0375	0.3179	-0.111	0.0361	0.963	0.895	1.037
Federal MC	-0.1215	0.0418	0.0036	-0.2034	-0.0396	0.886	0.816	0.961
Other MC	0.2437	0.1626	0.1339	-0.075	0.5624	1.276	0.928	1.755
Other	-0.1593	0.044	0.0003	-0.2454	-0.0731	0.853	0.782	0.93
Uninsured	-0.2343	0.0969	0.0156	-0.4243	-0.0444	0.791	0.654	0.957
Data Description: CA hospital data 1995-2009; CL- Confidence Limit								

Table 9b. Risk Estimate Adjusted Model with maternal medical conditions- Necrotizing enterocolitis								
	Estimate	Std Dev	P-Value	Estimate LCL	Estimate UCL	OR	OR LCL	OR UCL
Intercept	-3.4556	0.0747	<.0001	-3.6021	-3.3092			
Gestational Age (Reference Group: >=30 Weeks)								
23-24	0.7888	0.0596	<.0001	0.6719	0.9057	2.201	1.958	2.474
25-26	0.9856	0.0535	<.0001	0.8808	1.0903	2.679	2.413	2.975
27-28	0.7687	0.052	<.0001	0.6668	0.8707	2.157	1.948	2.388
29-30	0.388	0.0534	<.0001	0.2833	0.4928	1.474	1.327	1.637
Male	0.0579	0.0287	0.0437	0.00163	0.1142	1.06	1.002	1.121
Maternal Medical Conditions								
Diabetes	-0.0398	0.0715	0.5777	-0.1799	0.1003	0.961	0.835	1.106
Hypertension	-0.00596	0.0386	0.8773	-0.0817	0.0698	0.994	0.922	1.072
Maternal Race/Ethnicity (Reference Group: White, Non-Hispanic)								
Black	0.2091	0.0398	<.0001	0.1311	0.2871	1.233	1.14	1.333
Hispanic	0.1963	0.0383	<.0001	0.1212	0.2715	1.217	1.129	1.312
Asian/ Pacific Islander	0.0274	0.0524	0.6011	-0.0753	0.1301	1.028	0.927	1.139
Maternal Age Group (Reference Group: 18-35 Years)								
< 18	-0.0313	0.0671	0.6413	-0.1628	0.1003	0.969	0.85	1.105
> 35	0.00461	0.0415	0.9115	-0.0768	0.086	1.005	0.926	1.09
Maternal Education (Reference Group: High School Diploma/GED)								
No High School	0.0664	0.0618	0.2828	-0.0548	0.1876	1.069	0.947	1.206
Some High School	0.0814	0.0434	0.0609	-0.00371	0.1664	1.085	0.996	1.181
At Least Some College	-0.0378	0.0358	0.2903	-0.108	0.0323	0.963	0.898	1.033
Source of Payment (Reference Group: FFS)								
HMO	0.032	0.0578	0.5793	-0.0813	0.1453	1.033	0.922	1.156
Federal	0.1051	0.0616	0.0878	-0.0156	0.2258	1.111	0.985	1.253
Federal MC	0.2439	0.0659	0.0002	0.1148	0.3731	1.276	1.122	1.452
Other MC	0.2308	0.2585	0.3718	-0.2758	0.7374	1.26	0.759	2.091
Other	-0.0266	0.0725	0.7141	-0.1686	0.1155	0.974	0.845	1.122
Uninsured	-0.1695	0.1603	0.2903	-0.4837	0.1447	0.844	0.617	1.156
Data Description: CA hospital data 1995-2009; CL- Confidence Limit								

Table 9c. Risk Estimate Adjusted Model with maternal medical conditions- Any retinopathy of prematurity								
	Estimate	Std Dev	P-Value	Estimate LCL	Estimate UCL	OR	OR LCL	OR UCL
Intercept	-2.8225	0.0497	<.0001	-2.9199	-2.7251			
Gestational Age (Reference Group: >=30 Weeks)								
23-24	0.9622	0.0385	<.0001	0.8868	1.0376	2.617	2.427	2.822
25-26	1.4735	0.0339	<.0001	1.4071	1.5399	4.365	4.084	4.664
27-28	1.1247	0.0327	<.0001	1.0606	1.1888	3.079	2.888	3.283
29-30	0.5295	0.0335	<.0001	0.4639	0.5952	1.698	1.59	1.813
Male	-0.1221	0.0182	<.0001	-0.1577	-0.0865	0.885	0.854	0.917
Maternal Medical Conditions								
Diabetes	0.0483	0.042	0.2503	-0.0341	0.1307	1.049	0.967	1.14
Hypertension	0.0435	0.0239	0.0691	-0.00341	0.0905	1.044	0.997	1.095
Maternal Race/Ethnicity (Reference Group: White, Non-Hispanic)								
Black	-0.1125	0.0276	<.0001	-0.1667	-0.0583	0.894	0.846	0.943
Hispanic	0.5207	0.0237	<.0001	0.4742	0.5671	1.683	1.607	1.763
Asian/ Pacific Islander	0.3211	0.0305	<.0001	0.2614	0.3808	1.379	1.299	1.463
Maternal Age Group (Reference Group: 18-35 Years)								
< 18	-0.1048	0.0462	0.0235	-0.1954	-0.0141	0.901	0.823	0.986
> 35	0.1662	0.0249	<.0001	0.1174	0.2149	1.181	1.125	1.24
Maternal Education (Reference Group: High School Diploma/GED)								
No High School	0.0699	0.0387	0.0709	-0.00595	0.1458	1.072	0.994	1.157
Some High School	-0.0187	0.0291	0.5198	-0.0756	0.0382	0.981	0.927	1.039
At Least Some College	0.0682	0.0226	0.0025	0.024	0.1125	1.071	1.024	1.119
Source of Payment (Reference Group: FFS)								
HMO	0.5787	0.039	<.0001	0.5022	0.6551	1.784	1.652	1.925
Federal	0.4743	0.0418	<.0001	0.3924	0.5562	1.607	1.481	1.744
Federal MC	0.2652	0.0464	<.0001	0.1742	0.3561	1.304	1.19	1.428
Other MC	0.377	0.1766	0.0328	0.0309	0.7232	1.458	1.031	2.061
Other	0.0975	0.0498	0.0501	-0.00003	0.195	1.102	1	1.215
Uninsured	0.1628	0.1011	0.1073	-0.0353	0.361	1.177	0.965	1.435
Data Description: CA hospital data 1995-2009; CL- Confidence Limit								

Table 9d. Risk Estimate Adjusted Model with maternal medical conditions- Surgical procedure for retinopathy of prematurity

	Estimate	Std Dev	P-Value	Estimate LCL	Estimate UCL	OR	OR LCL	OR UCL
Intercept	-6.0984	0.1713	<.0001	-6.4341	-5.7627			
Gestational Age (Reference Group: >=30 Weeks)								
23-24	3.5212	0.1508	<.0001	3.2257	3.8168	33.826	25.171	45.457
25-26	3.2576	0.1494	<.0001	2.9649	3.5503	25.987	19.392	34.824
27-28	2.0295	0.1528	<.0001	1.73	2.329	7.61	5.641	10.267
29-30	0.7538	0.1668	<.0001	0.4268	1.0807	2.125	1.532	2.947
Male	0.0109	0.0412	0.7918	-0.07	0.0917	1.011	0.932	1.096
Maternal Medical Conditions								
Diabetes	0.0442	0.1062	0.6768	-0.1638	0.2523	1.045	0.849	1.287
Hypertension	0.067	0.0638	0.2937	-0.0581	0.1921	1.069	0.944	1.212
Maternal Race/Ethnicity (Reference Group: White, Non-Hispanic)								
Black	-0.5946	0.0704	<.0001	-0.7327	-0.4565	0.552	0.481	0.633
Hispanic	0.3221	0.0523	<.0001	0.2196	0.4247	1.38	1.246	1.529
Asian/ Pacific Islander	0.2745	0.0661	<.0001	0.1449	0.4042	1.316	1.156	1.498
Maternal Age Group (Reference Group: 18-35 Years)								
< 18	0.0376	0.1002	0.7076	-0.1588	0.234	1.038	0.853	1.264
> 35	0.0406	0.0573	0.4784	-0.0717	0.1529	1.041	0.931	1.165
Maternal Education (Reference Group: High School Diploma/GED)								
No High School	0.0127	0.0858	0.8827	-0.1555	0.1808	1.013	0.856	1.198
Some High School	-0.0957	0.0668	0.1522	-0.2267	0.0353	0.909	0.797	1.036
At Least Some College	0.0885	0.0509	0.0817	-0.0111	0.1882	1.093	0.989	1.207
Source of Payment (Reference Group: FFS)								
HMO	0.3847	0.0854	<.0001	0.2172	0.5521	1.469	1.243	1.737
Federal	0.2539	0.0918	0.0057	0.074	0.4338	1.289	1.077	1.543
Federal MC	0.0685	0.1051	0.5143	-0.1374	0.2745	1.071	0.872	1.316
Other MC	0.2744	0.376	0.4656	-0.4626	1.0113	1.316	0.63	2.749
Other	-0.0995	0.1125	0.3768	-0.32	0.1211	0.905	0.726	1.129
Uninsured	-0.0748	0.23	0.7452	-0.5256	0.3761	0.928	0.591	1.457
Data Description: CA hospital data 1995-2009; CL- Confidence Limit								

Table 9e. Risk Estimate Adjusted Model with maternal medical conditions- Any intraventricular hemorrhage

	Estimate	Std Dev	P-Value	Estimate LCL	Estimate UCL	OR	OR LCL	OR UCL
Intercept	-2.3346	0.0477	<.0001	-2.428	-2.2411			
Gestational Age (Reference Group: >=30 Weeks)								
23-24	1.3447	0.0373	<.0001	1.2715	1.4178	3.837	3.566	4.128
25-26	1.2258	0.0348	<.0001	1.1576	1.294	3.407	3.182	3.648
27-28	0.782	0.0342	<.0001	0.7151	0.849	2.186	2.044	2.337
29-30	0.3111	0.0352	<.0001	0.2421	0.3801	1.365	1.274	1.462
Male	0.1586	0.0189	<.0001	0.1216	0.1957	1.172	1.129	1.216
Maternal Medical Conditions								
Diabetes	-0.086	0.0479	0.0727	-0.1799	0.00791	0.918	0.835	1.008
Hypertension	-0.1914	0.0265	<.0001	-0.2434	-0.1394	0.826	0.784	0.87
Maternal Race/Ethnicity (Reference Group: White, Non-Hispanic)								
Black	-0.0263	0.0267	0.3247	-0.0788	0.0261	0.974	0.924	1.026
Hispanic	0.0411	0.0253	0.1049	-0.00857	0.0907	1.042	0.991	1.095
Asian/ Pacific Islander	-0.0135	0.0331	0.6829	-0.0783	0.0513	0.987	0.925	1.053
Maternal Age Group (Reference Group: 18-35 Years)								
< 18	0.0261	0.0453	0.5638	-0.0626	0.1149	1.026	0.939	1.122
> 35	-0.0534	0.0272	0.05	-0.1067	-0.00001	0.948	0.899	1
Maternal Education (Reference Group: High School Diploma/GED)								
No High School	-0.0318	0.0428	0.4576	-0.1156	0.0521	0.969	0.891	1.053
Some High School	0.0114	0.0297	0.701	-0.0468	0.0696	1.011	0.954	1.072
At Least Some College	0.0543	0.0232	0.0194	0.00878	0.0998	1.056	1.009	1.105
Source of Payment (Reference Group: FFS)								
HMO	0.0375	0.0362	0.3012	-0.0336	0.1085	1.038	0.967	1.115
Federal	0.0427	0.0393	0.2764	-0.0342	0.1197	1.044	0.966	1.127
Federal MC	0.1169	0.043	0.0065	0.0326	0.2011	1.124	1.033	1.223
Other MC	0.0561	0.1757	0.7493	-0.2883	0.4006	1.058	0.75	1.493
Other	-0.0767	0.0457	0.0934	-0.1663	0.0129	0.926	0.847	1.013
Uninsured	-0.2021	0.1022	0.0479	-0.4023	-0.00184	0.817	0.669	0.998
Data Description: CA hospital data 1995-2009; CL- Confidence Limit								

Table 9f. Risk Estimate Adjusted Model with maternal medical conditions- Intraventricular hemorrhage grade 3 & 4								
	Estimate	Std Dev	P-Value	Estimate LCL	Estimate UCL	OR	OR LCL	OR UCL
Intercept	-4.9134	0.1575	<.0001	-5.2222	-4.6047			
Gestational Age (Reference Group: >=30 Weeks)								
23-24	2.9953	0.1278	<.0001	2.7448	3.2458	19.991	15.562	25.681
25-26	2.4853	0.1272	<.0001	2.236	2.7347	12.005	9.355	15.405
27-28	1.7418	0.129	<.0001	1.489	1.9947	5.708	4.433	7.35
29-30	0.832	0.1369	<.0001	0.5637	1.1003	2.298	1.757	3.005
Male	0.3061	0.0423	<.0001	0.2232	0.389	1.358	1.25	1.475
Maternal Medical Conditions								
Diabetes	-0.2549	0.1151	0.0269	-0.4806	-0.0292	0.775	0.618	0.971
Hypertension	-0.4808	0.0717	<.0001	-0.6213	-0.3402	0.618	0.537	0.712
Maternal Race/Ethnicity (Reference Group: White, Non-Hispanic)								
Black	-0.0799	0.0604	0.1855	-0.1983	0.0384	0.923	0.82	1.039
Hispanic	0.0668	0.0543	0.2189	-0.0397	0.1732	1.069	0.961	1.189
Asian/ Pacific Islander	-0.1012	0.0745	0.1742	-0.2471	0.0448	0.904	0.781	1.046
Maternal Age Group (Reference Group: 18-35 Years)								
< 18	0.1102	0.0978	0.2598	-0.0815	0.302	1.117	0.922	1.353
> 35	-0.1171	0.0616	0.0575	-0.2379	0.00373	0.889	0.788	1.004
Maternal Education (Reference Group: High School Diploma/GED)								
No High School	0.0224	0.0935	0.8105	-0.1608	0.2056	1.023	0.851	1.228
Some High School	0.00631	0.0646	0.9222	-0.1204	0.133	1.006	0.887	1.142
At Least Some College	0.0277	0.0516	0.5911	-0.0734	0.1289	1.028	0.929	1.138
Source of Payment (Reference Group: FFS)								
HMO	0.061	0.0961	0.5255	-0.1273	0.2492	1.063	0.88	1.283
Federal	0.1247	0.1022	0.2221	-0.0755	0.3249	1.133	0.927	1.384
Federal MC	0.0304	0.1062	0.775	-0.1778	0.2385	1.031	0.837	1.269
Other MC	-0.2313	0.3797	0.5424	-0.9756	0.5129	0.793	0.377	1.67
Other	-0.0139	0.1136	0.9028	-0.2364	0.2087	0.986	0.789	1.232
Uninsured	-0.3242	0.3587	0.3661	-1.0273	0.3789	0.723	0.358	1.461
Data Description: CA hospital data 1995-2009; CL- Confidence Limit								

Table 9g. Risk Estimate Adjusted Model with maternal medical conditions- Any infection								
	Estimate	Std Dev	P-Value	Estimate LCL	Estimate UCL	OR	OR LCL	OR UCL
Intercept	-1.4397	0.0365	<.0001	-1.5112	-1.3683			
Gestational Age (Reference Group: >=30 Weeks)								
23-24	0.8431	0.0293	<.0001	0.7857	0.9005	2.324	2.194	2.461
25-26	1.1855	0.0262	<.0001	1.1342	1.2368	3.272	3.109	3.445
27-28	0.814	0.0245	<.0001	0.766	0.862	2.257	2.151	2.368
29-30	0.3818	0.0243	<.0001	0.3341	0.4294	1.465	1.397	1.536
Male	0.0476	0.015	0.0015	0.0182	0.0771	1.049	1.018	1.08
Maternal Medical Conditions								
Diabetes	0.0452	0.0357	0.2048	-0.0247	0.1151	1.046	0.976	1.122
Hypertension	-0.099	0.0197	<.0001	-0.1375	-0.0604	0.906	0.872	0.941
Maternal Race/Ethnicity (Reference Group: White, Non-Hispanic)								
Black	0.00812	0.0215	0.705	-0.0339	0.0502	1.008	0.967	1.051
Hispanic	0.3369	0.0202	<.0001	0.2974	0.3764	1.401	1.346	1.457
Asian/ Pacific Islander	0.068	0.0262	0.0093	0.0168	0.1193	1.07	1.017	1.127
Maternal Age Group (Reference Group: 18-35 Years)								
< 18	-0.0379	0.037	0.3061	-0.1105	0.0347	0.963	0.895	1.035
> 35	0.0313	0.0213	0.1416	-0.0104	0.0729	1.032	0.99	1.076
Maternal Education (Reference Group: High School Diploma/GED)								
No High School	-0.0765	0.0338	0.0237	-0.1428	-0.0102	0.926	0.867	0.99
Some High School	0.0216	0.0237	0.3621	-0.0249	0.0681	1.022	0.975	1.07
At Least Some College	0.0541	0.0185	0.0035	0.0178	0.0903	1.056	1.018	1.095
Source of Payment (Reference Group: FFS)								
HMO	0.1781	0.0293	<.0001	0.1207	0.2355	1.195	1.128	1.265
Federal	0.2067	0.0317	<.0001	0.1446	0.2689	1.23	1.156	1.309
Federal MC	0.4376	0.0347	<.0001	0.3697	0.5056	1.549	1.447	1.658
Other MC	0.2118	0.1414	0.1341	-0.0653	0.4889	1.236	0.937	1.63
Other	0.0809	0.0367	0.0274	0.009	0.1529	1.084	1.009	1.165
Uninsured	-0.4863	0.086	<.0001	-0.6547	-0.3178	0.615	0.52	0.728
Data Description: CA hospital data 1995-2009; CL- Confidence Limit								

Table 10: California-Hospital Volume Validity Testing

Table 10. California-Hospital Volume Validity Testing														
	Unadjusted							Adjusted						
Quartile	BPD	NEC	ROP	Surgica I ROP	IVH	IVH Grades 3/4	Any Infection	BPD	NEC	ROP	Surgica I ROP	IVH	IVH Grades 3/4	Any Infection
Lowest	0.152	0.053	0.125	0.024	0.166	0.063	0.301	0.140	0.053	0.137	0.023	0.159	0.030	0.308
2	0.162	0.055	0.132	0.025	0.157	0.052	0.334	0.154	0.054	0.144	0.025	0.153	0.027	0.339
3	0.203	0.072	0.169	0.028	0.175	0.053	0.363	0.200	0.072	0.177	0.030	0.175	0.028	0.368
Highest	0.205	0.066	0.222	0.034	0.186	0.052	0.393	0.207	0.066	0.217	0.034	0.186	0.034	0.390
P-value, test of trend	<0.001	<0.001	0.004	0.002	<0.001	<0.001	<0.001	<0.001	0.028	0.004	0.656	0.932	0.004	0.005
	Unadjusted							Adjusted						
Quintile	BPD	NEC	ROP	Surgica I ROP	IVH	IVH Grades 3/4	Any Infection	BPD	NEC	ROP	Surgica I ROP	IVH	IVH Grades 3/4	Any Infection
Lowest	0.168	0.040	0.097	0.018	0.164	0.058	0.275	0.152	0.040	0.109	0.018	0.156	0.028	0.282
2	0.151	0.063	0.131	0.026	0.168	0.063	0.326	0.140	0.062	0.141	0.026	0.162	0.032	0.330
3	0.175	0.063	0.159	0.029	0.161	0.045	0.360	0.170	0.064	0.170	0.029	0.159	0.024	0.365
4	0.210	0.069	0.177	0.029	0.180	0.056	0.370	0.208	0.069	0.184	0.030	0.180	0.031	0.372
Highest	0.205	0.067	0.225	0.035	0.186	0.051	0.394	0.208	0.067	0.219	0.034	0.187	0.034	0.391
P-value, test of trend	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	0.009	<0.001	0.475	0.465	<0.001	<0.001

Table 11: Correlations with Mortality

Table 11. Correlations with Mortality							
Unadjusted 1 year results (Spearman)							
	BPD	NEC	ROP	Surgical ROP	Any IVH	IVH 3 & 4	Any Infection
BPD							
NEC	0.0866						
ROP	-0.1609	-0.0545					
Surgical ROP	0.1153	0.0751	0.5333				
Any IVH	0.0774	0.2094	0.0199	0.1575			
IVH 3 & 4	0.0197	0.2573	-0.0040	0.1623	0.4187		
Any Infection	0.0120	0.4353	0.0559	0.1459	0.3055	0.2663	
Death	0.0611	0.0775	0.1870	0.1535	0.0740	0.1988	0.0215
Adjusted 1 year results (Spearman)							
	BPD	NEC	ROP	Surgical ROP	Any IVH	IVH 3 & 4	Any Infection
BPD							
NEC	0.0798						
ROP	-0.1337	-0.0564					
Surgical ROP	0.1354	0.0744	0.4730				
Any IVH	0.0545	0.2055	0.0155	0.1367			
IVH 3 & 4	-0.0150	0.2510	-0.0194	0.1436	0.4114		
Any Infection	0.0282	0.4445	-0.0215	0.0967	0.3103	0.2352	
Death	0.0454	0.0536	0.1067	0.0354	0.0285	0.1473	-0.0642