

Supplementary Online Content

Howell EA, Janevic T, Hebert PL, Egorova NN, Balbierz A, Zeitlin J. Differences in morbidity and mortality rates in black, white, and Hispanic very preterm infants among New York City hospitals. *JAMA Pediatr*. Published online January 2, 2018. doi:10.1001/jamapediatrics.2017.4402

eTable 1. Severe Neonatal Morbidity *ICD-9* Diagnosis and Procedure Codes

eTable 2. *ICD-9* Codes and Birth Certificate Variables for Ascertainment of Maternal Conditions

eTable 3. *ICD-9* Codes for Congenital Anomalies

eFigure 1. Kolmogorov-Smirnov Test of Difference Between Racial-Ethnic Distribution of VPTB Infants With Increasing Hospital Neonatal Morbidity-Mortality Rank

eFigure 2. Sensitivity Analysis Using VLBW Cohort Showing Correlation Between Ranks Using Either Approach

eFigure 3. Sensitivity Analysis Using Mortality Only Outcome Showing Correlation Between Ranks Using Either Approach

eFigure 4. Sensitivity Analysis of Hospitals With Level 3-4 Nurseries Only Showing Kolmogorov-Smirnov Graph

eFigure 5. Sensitivity Analysis of Risk Adjustment Model Excluding APGAR Score Showing Correlation Between Ranks Using Either Approach

This supplementary material has been provided by the authors to give readers additional information about their work.

eTable 1. Severe Neonatal Morbidity ICD-9 Diagnosis and Procedure Codes

Outcome	Subgroup	ICD-9 code
BPD		770.7
NEC		
	NEC_unspec	777.5
	NEC_stage2	777.52
	NEC_stage3	777.53
	Laparotomy	456, 4561, 4562, 4563, 457, 4571, 4572, 4573, 4574, 4575, 4576, 4579, 458, 459, 4590, 4591, 4592, 4593, 4594, 4595, 460, 4601, 4602, 4603, 4604, 4605, 461, 4610, 4611, 4613, 4614, 462, 4620, 4621, 4622, 4623, 4624, 463, 4631, 4632, 4639, 464, 4640, 4641, 4642, 4643, 468, 4680, 4681, 4682, 4685, 4686, 4687, 541, 541, 5411, 5412, 5419
ROP		
	ROP_stage3	362.25
	ROP_stage4	362.26
	ROP_stage5	362.27
	ROP_surg	142, 1421, 1422, 1423, 1424, 1425, 1426, 1427, 1429, 1434, 144, 1441, 1449, 145, 1451, 1452, 1453, 1454, 1455, 1459
IVH		
	IVH_grade3	772.13
	IVH_grade4	772.14

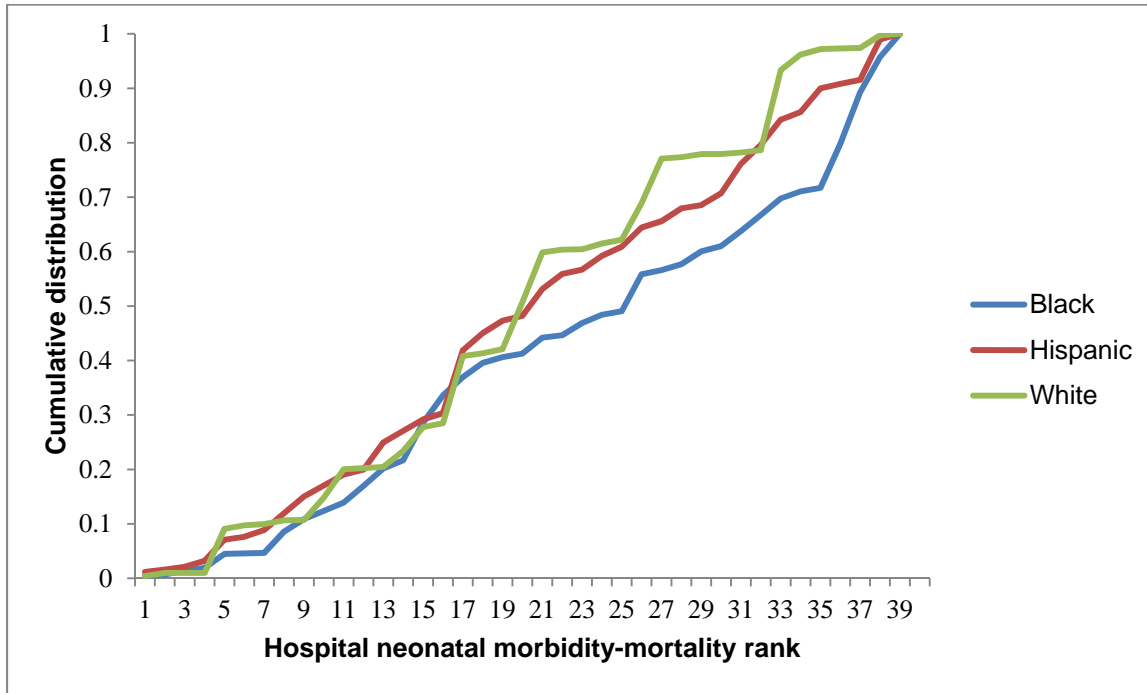
eTable 2: ICD-9 Codes and Birth Certificate Variables for Ascertainment of Maternal Conditions

	ICD-9 Codes from SPARCS data	Birth certificate variable
Gestational diabetes	648.8x	Gestational diabetes (yes/no)
Pre-gestational diabetes	250.00-250.93, 357.2, 362.01, 362.02, 363.03-363.07, 366.41, and 648.01-648.04	Pre-gestational diabetes (yes/no)
Gestational hypertension including preeclampsia	642.3x, 642.4x, 642.5x, 642.7x	Gestational-related hypertension (yes/no)
Pre-gestational hypertension	642.0x, 642.1x, 642.2x	Pre-pregnancy hypertension (yes/no)
Abnormal placentation	641.0x, 641.1x, 762.0, 762.1	Placental abruption (yes/no)
PROM	658.1x, 658.2x	Premature rupture of membranes (yes/no)
Chorioamnionitis	646.6x, 658.4x, 659.2x, 659.3x	Chorioamnionitis (yes/no)

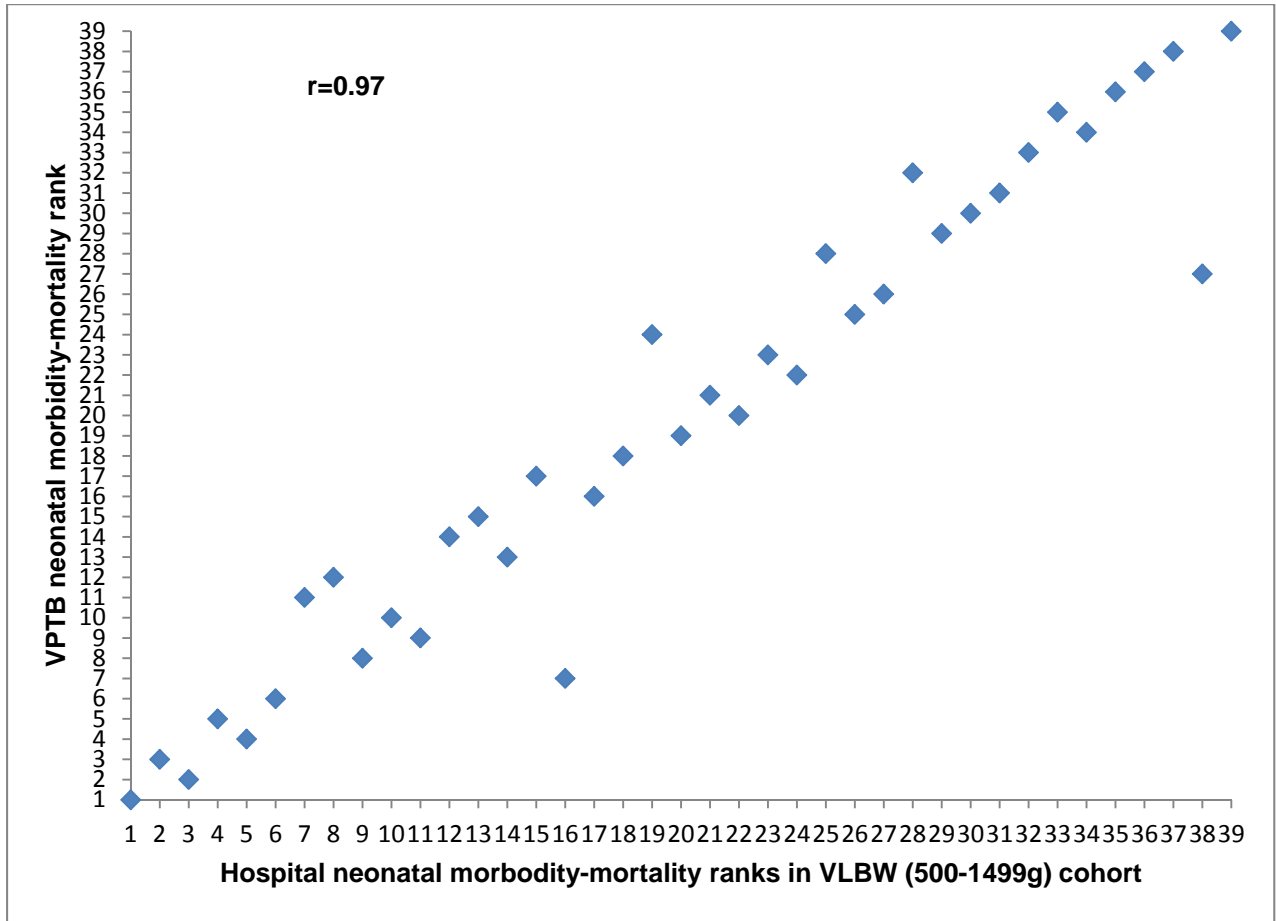
eTable 3. ICD-9 Codes for Congenital Anomalies

Subgroup	Description	ICD-9 code
Gastrointestinal	Abdominal wall defect	756.70, 756.79
	Tracheoesophageal fistula	750.3, 750.4
	Small bowel or upper GI anomalies	750.5, 750.7, 750.8, 750.9, 751.1, 751.5, 751.8, 751.9, 751.5, 560.2, 751.4
	Meckel's syndrome	751.0
	Large bowel	751.2, 751.3, 771.1
	Liver, bile duct, pancreas	751.61, 751.7, 751.60, 751.69
Genitourinary	Renal	753.0, 753.12, 753.14, 753.15, 753.10, 753.19, 753.3, 753.4
	Obstructions	753.21, 753.22, 753.23, 753.6, 753.7, 753.8, 753.9, 753.20, 756.71
Central Nervous System	Spina bifida, etc.	741.00, 741.01, 741.02, 741.03,, 741.90, 741.91, 741.92, 741.93, 742.59, 742.0
	Brain	742.1, 742.4, 742.2, 742.3, 742.8, 742.9
Pulmonary	Congenital Diaphragmatic Hernia	519.4, 553.3, 748.9, 750.6, 756.6
	Airway	748.3, 748.9
	Cyst, etc.	748.4, 748.60, 748.69, 748.8
Cardiovascular	Aortic valve	746.3, 746.4, 424.1
	Aortic arch	747.10, 747.21, 747.29, 747.11, 747.22, 746.81
	Hypoplastic Left Heart Syndrome	746.7
	Endocardial fibroelastosis	425.3
	Mitral valve	746.5, 424.0, 746.6, 746.84
	Transpositions	745.10, 745.19, 745.12
	Coronary/Myocardial	746.85, 425.1
	Common Right Ventricle, etc.	745.3, 745.11, 745.0
	Pulmonary valve — tricuspid	746.01, 746.83, 746.2, 746.09, 745.2, 746.1
	Cushion, etc.	745.60, 745.61, 745.69
	Pulmonary veins, etc.	746.82, 747.41, 747.42
	Great vein	747.40, 747.49
	Skeletal	
Chromosomal Syndromes	Conjoined twins	758.3, 758.5, 758.89, 758.9, 759.89, 759.9, 759.7, 759.4
Other	Non-immune hydrops, Hamartoses, Congenital anemia	778.0, 759.6, 776.5

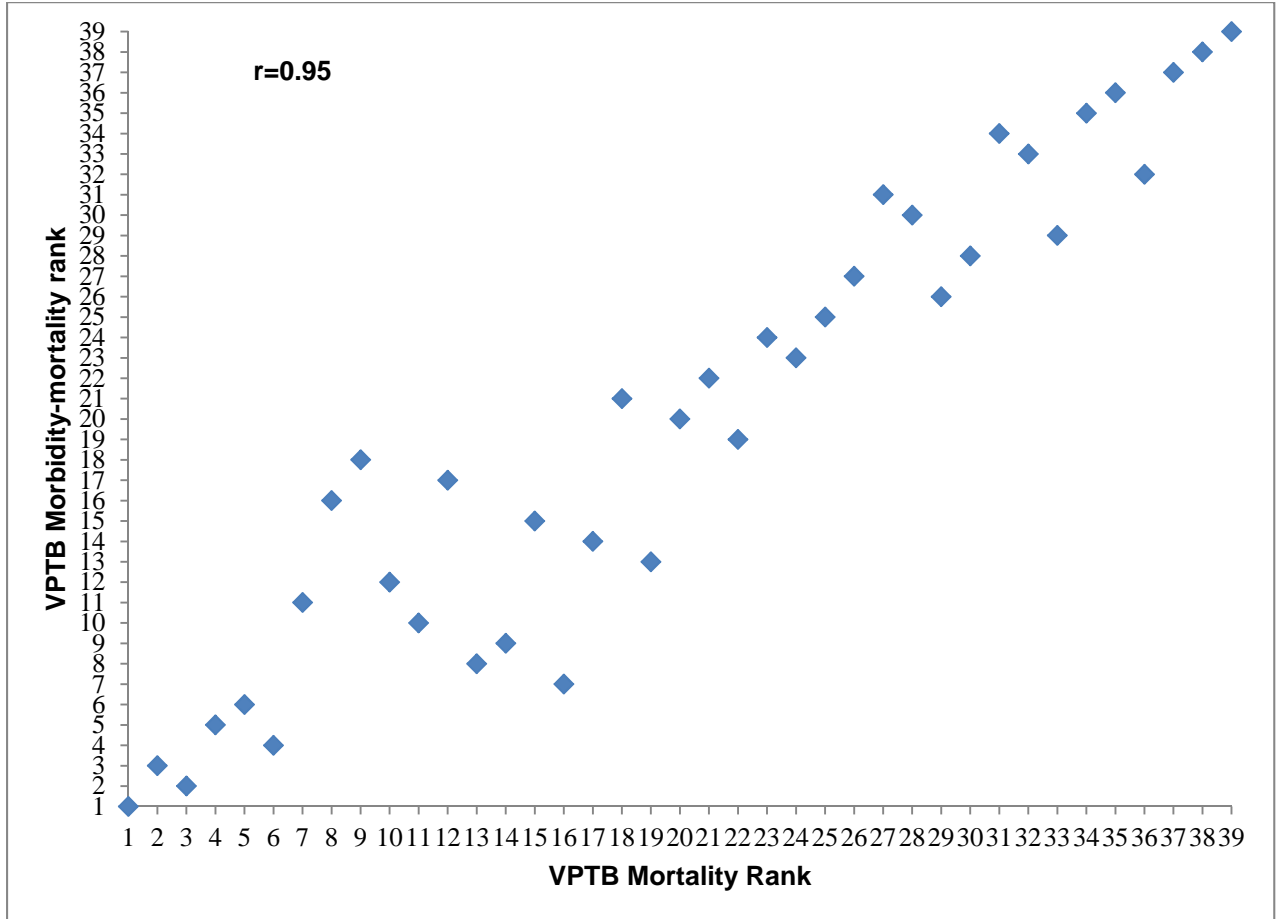
eFigure 1. Kolmogorov-Smirnov Test of Difference Between Racial-Ethnic Distribution of VPTB Infants With Increasing Hospital Neonatal Morbidity-Mortality Rank



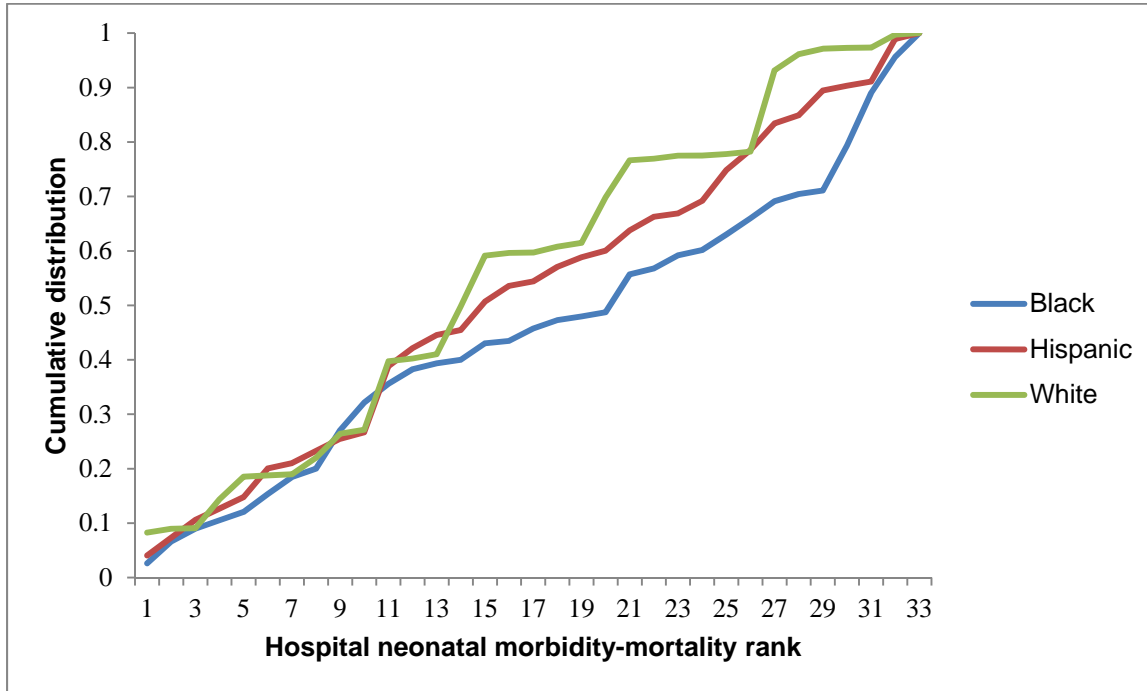
eFigure 2. Sensitivity Analysis Using VLBW Cohort Showing Correlation Between Ranks Using Either Approach



eFigure 3. Sensitivity Analysis Using Mortality Only Outcome Showing Correlation Between Ranks Using Either Approach



eFigure 4. Sensitivity Analysis of Hospitals With Level 3-4 Nurseries Only Showing Kolmogorov-Smirnov Graph*



*We present the Kolmogorov-Smirnov graph for this sensitivity analysis because the number of ranked hospitals is different in the sensitivity subset (n=33) compared to the primary analytic dataset (n=39), thus a correlation coefficient isn't appropriate

eFigure 5. Sensitivity Analysis of Risk Adjustment Model Excluding APGAR Score Showing Correlation Between Ranks Using Either Approach

