

**Health outcomes among offspring of United States Coast Guard responders to the Deepwater Horizon oil spill, 2010-2011**  
**Supplemental File: Infant Outcome Assessment**

- **Low birthweight (<2500 grams)** was determined from ICD-9 codes 764.xx (slow fetal growth and fetal malnutrition), 765.0x (extreme immaturity), and 765.1x (other preterm infants); the fifth digit indicates a birth weight category. The first code recorded within 28 days of an infant’s birth was used to establish the weight category. If more than one code was assigned on the same day, the lowest recorded weight was used. Infants with no weight codes were assumed to be of normal birth weight.
- **Preterm birth (< 37 completed weeks’ gestation)** was determined from ICD-9 codes 765.2x (weeks of gestation), 765.1x (other preterm infants), and 644.2x (early onset of delivery). Infants with no gestational age codes were assumed to be full term.
- **Major structural birth defect(s)** were defined by selected ICD-9 codes (see Table); categories of birth defects required relevant diagnoses in the first year of life, either on 1 inpatient record or 2 outpatient records on different days.

**Table.** List of ICD-9 Codes for Major Structural Birth Defects, Department of Defense Birth and Infant Health Research Program Data

Birth Defect Category	ICD-9 Code	ICD-9 Code Description
Spina bifida	741.0x	Spina bifida with hydrocephalus
	741.9x	Spina bifida without hydrocephalus
Encephalocele	742.0	Encephalocele
Microcephalus	742.1	Microcephalus
Holoprosencephaly	742.2	Reduction deformities of brain
Anophthalmia, microphthalmia	743.00	Clinical anophthalmos, unspecified
	743.06	Cryptophthalmos
	743.1	Microphthalmos, unspecified
	743.11	Simple microphthalmos
	743.12	Microphthalmos associated with other anomalies of eye and adnexa
Cataracts and other lens defects	743.30	Congenital cataract, unspecified
	743.31	Capsular and subcapsular cataract
	743.32	Cortical and zonular cataract
	743.33	Nuclear cataract
	743.34	Total and subtotal cataract, congenital
	743.35	Congenital aphakia
	743.36	Anomalies of lens shape
	743.2x	Buphthalmos
Anotia, microtia	744.01	Absence of external ear
	744.23	Microtia
Other cardiac defects: septal defects, heterotaxy, partial anomalous pulmonary venous return	745.4	Ventricular septal defect
	745.8	Bulbus cordis anomalies and anomalies of cardiac septal closure (other)
	745.9	Bulbus cordis anomalies and anomalies of cardiac septal closure (unspecified defect of septal closure)
	747.42	Partial anomalous pulmonary venous return
	759.3	Situs inversus (Laterality defects—heterotaxy)

Birth Defect Category	ICD-9 Code	ICD-9 Code Description
Severe cardiac defects: single ventricle, tricuspid atresia, Ebstein's anomaly, hypoplastic left heart, hypoplastic right heart, common truncus, transposition of great vessels, atrioventricular septal defects, tetralogy of fallot, aortic atresia/stenosis, coarctation, total anomalous pulmonary venous return, anomalous coronary artery	745.0	Common truncus
	745.1x	Transposition of great vessels
	745.2	Tetralogy of Fallot
	745.3	Single ventricle (common ventricle)
	745.6x	Atrioventricular septal defects
	745.7	Cor biloculare
	746.00	Pulmonary valve anomaly, unspecified
	746.01	Pulmonary valve atresia, congenital
	746.1	Tricuspid atresia and stenosis
	746.2	Ebstein's anomaly
	746.3	Aortic valve atresia/stenosis
	746.7	Hypoplastic left heart syndrome
	746.85	Coronary artery anomaly
	747.1x	Coarctation of aorta
	747.22	Atresia and stenosis of aorta
747.41	Total anomalous pulmonary venous connection	
Choanal atresia/stenosis	748.0	Choanal atresia
Cleft lip and/or palate	749.0x	Cleft palate
	749.1x	Cleft lip
	749.2x	Cleft palate with cleft lip
Biliary atresia	751.61	Biliary atresia
Esophageal atresia ± tracheoesophageal fistula	750.3	Tracheoesophageal fistula, esophageal atresia and stenosis
Intestinal atresia/stenosis	751.1	Atresia and stenosis of small intestine
	751.2	Atresia and stenosis of large intestine, rectum, and anal canal
Pyloric stenosis	750.5	Congenital hypertrophic pyloric stenosis
Exstrophy, bladder	753.5	Exstrophy of urinary bladder
Hypospadias—second or third degree	752.61	Hypospadias
Renal agenesis/hypoplasia	753.0	Renal agenesis and dysgenesis
Renal dysplasia	753.15	Renal dysplasia
Congenital hydronephrosis	753.2x	Obstructive defects of renal pelvis and ureter
	753.6	Atresia and stenosis of urethra and bladder neck
Posterior urethral valve and/or prune belly	756.71	Prune belly syndrome
	756.72	Omphalocele
Gastroschisis or omphalocele	756.73	Gastroschisis
	756.79	Other congenital anomalies of abdominal wall
Diaphragmatic hernia	756.6	Anomalies of diaphragm
Limb reduction defects	755.2x	Reduction deformities of upper limb
	755.3x	Reduction deformities of lower limb
	755.4	Reduction deformities, unspecified limb
	755.58	Congenital cleft hand