

### **Supplementary file 1**

#### **Diagnostic codes<sup>†</sup> extracted from the National Neonatal Research Database (NNRD):**

Respiratory distress syndrome if any of the following:

- '15574'- signs of respiratory distress of newborn
- '15572'- Respiratory distress syndrome
- '11010179'- respiratory distress-signs of
- '15571' Respiratory Distress (ARDS)

Pulmonary hypoplasia if any of the following:

- '16143'- Hypoplastic lungs
- '16154'- Hypoplasia and dysplasia of lung
- '10892'- Pulmonary hypoplasia
- '16151'- Agenesis of lung

Persistent pulmonary hypertension of the newborn if any of the following:

- '15241'- Primary pulmonary hypertension (not PPHN)
- '15242'- Secondary pulmonary hypertension (not PPHN)
- '10010891'- Pulmonary hypertension (secondary)
- '10891'-Pulmonary hypertension (secondary)
- '10890'- Pulmonary hypertension (primary)
- '10010890'- Pulmonary hypertension (primary)
- '15621'- Pulmonary hypertension (PPHN)
- '10829'- Persistent Pulmonary Hypertension of the Newborn (PPHN)
- '15630'- Persistent Pulmonary Hypertension (PPHN secondary to other condition)
- '15629'- Persistent Pulmonary Hypertension (PPHN: idiopathic)

Meconium Aspiration Syndrome:

- '15588'- Meconium aspiration syndrome

Congenital pneumonia if any of the following:

- '15577'- Congenital pneumonia due to viral agent
- '15581'- Congenital pneumonia due to Streptococcus, group B
- '15580'- Congenital pneumonia due to Staphylococcus
- '15583'- Congenital pneumonia due to Pseudomonas
- '15585'- Congenital pneumonia due to other organisms
- '15584'- Congenital pneumonia due to other bacterial agents
- '15582'- Congenital pneumonia due to Escherichia coli
- '15578'- Congenital pneumonia due to Chlamydia
- '15586'- Congenital pneumonia (unknown or unspecified cause)
- '15587'- Congenital pneumonia

Congenital diaphragmatic hernia if any of the following:

- '16495'- Congenital diaphragic hernia
- '16497'- Eventration of diaphragic hernia
- '1001925'- Unspecified repair of diaphragmatic hernia
- '1006671'- Repair of congenital diaphragmatic hernia
- '10905'- Recurrent congenital diaphragmatic hernia
- '11660'- Prosthetic repair of congenital diaphragmatic hernia (specify)
- '11657'- Primary repair of congenital diaphragmatic hernia
- '1001924'- Other specified repair of diaphragmatic hernia
- '11597'- Other repair of diaphragmatic hernia (specify)
- '10694'- Morgagni diaphragmatic hernia
- '1015977'- Diaphragmatic hernia - right
- '1015978'- Diaphragmatic hernia - left
- '1010217'- Diaphragmatic hernia - left
- '10010246'- Diaphragmatic hernia - congenital

Prolonged rupture of membranes >24 hr if any of the following:

- '15406'- Prolonged preterm rupture membranes >24hr
- '15459'- Prolonged rupture membranes (PROM: Term)
- '15407'- Prolonged rupture membranes >24hr
- '15462'- Preterm pre-labour rupture of membranes (PROM >24hrs)

† These diagnostic codes are specific to the Badger Net EPR system developed by Clevermed Ltd and from which the NNRD pulls neonatal data.

**Supplementary file 2**

Congenital heart disease diagnoses in order of frequency

Diagnoses	Gestation (Weeks)			N (column percentage)
	<29	29 to 33	≥34	
Ventricular Septal Defect (VSD)	79	85	160	324 (27.9%)
Atrial Septal Defect (ASD)	111	52	96	259 (22.2%)
Pulmonary stenosis	31	23	15	69 (5.9%)
Transposition of the great arteries	4	11	52	67 (5.8%)
Ventricular hypertrophy	11	13	26	50 (4.3%)
Atrioventricular Septal Defect (AVSD)	1	8	25	34 (2.9%)
Coarctation of aorta	4	7	19	30 (2.6%)
Congenital malformations of cardiac chambers and connections	2	4	23	29 (2.5%)
Tetralogy of Fallot	5	6	14	25 (2.2%)
Other congenital heart diagnoses	34	55	186	275 (23.7%)
<b>Total</b>	<b>282</b>	<b>264</b>	<b>616</b>	<b>1162</b>