Supplement 1: Definition of perinatal brain injury used in the CHERuB study

Extensions to the Department of Health and Social Care definition:

Any of the following recorded in any *Diagnosis* field:

- Grade 1 Hypoxic Ischaemic Encephalopathy (HIE)
- Mild Neonatal Encephalopathy
- Mild Hypoxic Ischaemic Encephalopathy HIE)

Any of the following recorded in any *Diagnosis* field:

- 1. Intraventricular haemorrhage (IVH Grade 1)
- 2. Intraventricular haemorrhage (IVH Grade 2)

Any of the following recorded in any cranial ultrasound findings field:

- 1. IVH Grade 1
- 2. IVH Grade 2

Department of Health and Social Care definition of brain injury: <u>HIE</u>

Any of the following recorded in any *Diagnosis* field:

- 1. Severe Hypoxic Ischaemic Encephalopathy (HIE)
- 2. Severe Neonatal Encephalopathy
- 3. Grade 3 Hypoxic Ischaemic Encephalopathy (HIE)
- 4. Moderate Hypoxic Ischaemic Encephalopathy (HIE)
- 5. Moderate Neonatal Encephalopathy
- 6. Grade 2 Hypoxic Ischaemic Encephalopathy (HIE)

OR

The following recorded in *daily care neurology* field: Therapeutic hypothermia induced - for 2 or more consecutive days

Seizures

Any of the following recorded in any *daily care neurology* field: 1. Seizure occurred

Intracranial haemorrhage

Any of the following recorded in any Diagnosis field:

- 3. Subdural haemorrhage due to birth injury
- 4. Cerebral haemorrhage due to birth injury
- 5. Traumatic intraventricular haemorrhage
- 6. Subarachnoid haemorrhage due to birth injury
- 7. Subarachnoid haemorrhage
- 8. Tentorial tear due to birth injury
- 9. Intracranial laceration and haemorrhage due to birth injury
- 10. Large intraventricular haemorrhage (IVH Grade 3)
- 11. Intraventricular haemorrhage/parenchymal
- 12. Parenchymal haemorrhage
- 13. Intraventricular haemorrhage (IVH Grade 4)
- 14. Intracranial Haemorrhage (unknown or unspecified cause)
- 15. Intracerebral haemorrhage
- 16. Intracerebral haemorrhage (term infant)
- 17. Intraventricular haemorrhage (perinatal)
- 18. Post-haemorrhagic hydrocephalus

OR

Any of the following recorded in any cranial ultrasound findings field:

- 3. Large intraventricular haemorrhage (IVH Grade 3)
- 4. Intraventricular haemorrhage/parenchymal haemorrhage (IVH Grade 4)
- 5. Parenchymal haemorrhage

OR

Any of the following recorded in any procedure field:

- 1. Ventriculoperitoneal or other ventricular shunt
- 2. External ventricular drain
- 3. Ventricular drain with reservoir
- 4. Insertion of ventricular peritoneal shunt.
- 5. Insertion of Rickham reservoir
- 6. Insertion of ventriculo-atrial CSF shunt
- 7. Insertion of ventriculo-peritoneal CSF shunt

Creation of ventriculoperitoneal shunt

Preterm white matter injury

Any of the following recorded in any *Diagnosis* field:

1. Cystic periventricular leukomalacia

OR

Any of the following recorded in any *cranial ultrasound findings* field: Cystic periventricular leukomalacia

Perinatal stroke

Any of the following recorded in any Diagnosis at discharge field:

- 1. Neonatal stroke
- 2. Infarction: Middle cerebral artery (stroke)
- 3. Cerebrovascular accident (stroke)
- 4. Cerebral venous thrombosis

Neonatal cerebral ischaemia

Central Nervous System Infection

Any of the following diagnosis codes recorded in the diagnosis field:

- 1. Bacterial meningitis
- 2. Viral meningitis
- 3. Meningitis streptococcal
- 4. Meningitis bacterial (specific organism)
- 5. Meningitis bacterial (unknown or unspecified organism)
- 6. Meningitis Candida
- 7. Candida encephalitis
- 8. Congenital herpes infection

Any pathogen recorded in the suspected infection data field Pathogen in CSF

Kernicterus

Any of the following diagnoses recorded in any Diagnosis field:

- 1. Bilirubin encephalopathy (immune)
- 2. Kernicterus (unspecified or unknown cause)