



## Medical care & clinical practice

# Postnatal management of newborn infants with hypoxic ischaemic encephalopathy (HIE)

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### Statement of the standard

Newborn infants who have suffered from severe hypoxic-ischaemia receive early evaluation and appropriate postnatal management including therapeutic hypothermia and monitoring.



#### For parents and family

- Parents are informed by healthcare professionals about the management and outcome of hypoxic ischaemic encephalopathy (HIE).
- Parents receive counselling regarding the expected short- and long-term outcome and prognosis related to HIE prior to discharge by healthcare professionals.



#### For neonatal unit

- A unit guideline on management of HIE including monitoring blood glucose, a-EEG, seizures, heart rate, oxygen saturation, PCO<sub>2</sub>, and blood pressure is available and regularly updated.
- Infants who require hypothermia treatment are managed in centres with documented expertise and experience including necessary transfer.



#### For health service

- A national guideline on management of HIE including criteria for hypothermia treatment is available and regularly updated.
- Hypothermia treatment including documented follow-up at 2 years (e.g. Bayley III or similar) and necessary education is coordinated and organised.
- Support services for families with infants with HIE are available.

### Benefits

Short-term benefits:

- Reduced brain injury due to excitatory neurotransmitters and reactive oxygen species
- Improved prognosis using stratified hypoxic ischaemic encephalopathy (HIE) severity, e.g. using neurophysiological monitoring (a-EEG or EEG)
- Reduced brain injury by early treatment of seizures
- Reduced mortality

Long-term benefits:

- Improved neurocognitive outcome, increasing the rate of disability free outcome at 5 years reduced health and societal costs, reduced occurrence of epilepsy at 2 years, less severe cerebral palsy in survivors



#### For healthcare professionals

- A unit guideline on management of HIE including criteria for hypothermia treatment is adhered to by all healthcare professionals.
- Training in assessment and management of encephalopathic infants is attended by all responsible healthcare professionals.
- Moderate hypothermia treatment is started within 6 hours and continued for 72 hours after birth of eligible infants.



#### For hospital

- Training in assessment and management of encephalopathic infants is ensured.
- At designated units, cooling devices and monitoring equipment are available.

