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Contact: guidelines@health.qld.gov.au

Queensland Government

Encephalopathy Severity (Modified Sarnat) Assessment

Facility: .....

(Affix identification label here)

URN:

Family name:

Given name(s):

Address:

Date of birth: Sex: ☐ M ☐ F ☐ I

Purpose: To assess newborns with evidence of a perinatal hypoxic event who meet screening criteria for suspected Hypoxic-Ischaemic Encephalopathy (HIE) to guide ongoing management, including consideration of Therapeutic Hypothermia (TH).

Contact RSQ as early as possible to consult with a Neonatologist (Ph: 1300 799 127)

Therapeutic Hypothermia (TH) Eligibility Checklist

- Complete the checklist in sequence (i.e. Steps 1 to 3).
- If Step 3 is reached, complete the *Modified Sarnat Assessment* (page 2) before determining eligibility for TH.
- Record the outcome of the assessment.
- Return to Step 3 to determine eligibility for TH.
- If not eligible for TH, continue the *Modified Sarnat Assessment* hourly for the first 6 hours of life, or until criteria for TH are met (e.g. an initial assessment of Mild progresses to Moderate or Severe).

Step	Checklist *(tick all that apply)*		Yes	No
1	☐ APGAR score ≤5 at 10 minutes; *OR* ☐ pH <7 and/or base excess worse than or equal to -12 mmol/L on any cord* or newborn blood gas in first hour of birth; *OR* ☐ Mechanical ventilation or ongoing resuscitation** ≥10 minutes	➡ At least **ONE (1)** criterion present?	Proceed to **Step 2**	Continue routine observation and clinical monitoring
2	☐ ≥35 weeks^ ☐ Birth weight ≥1800 grams ☐ No contraindications ☐ Able to begin cooling within 6 hours of birth ☐ Not moribund with plans for full care	➡ **ALL** criteria met?	Complete *Modified Sarnat Assessment (page 2)* THEN Proceed to **Step 3**	Not *currently* eligible for TH Continue observation and clinical monitoring Contact RSQ if concerns remain

STOP

Complete the *Modified Sarnat Assessment* (page 2) before determining eligibility for TH.
Return to Step 3 once the assessment is complete.

Step	Checklist *(tick all that apply)*		Yes	No
3	☐ Completed *Modified Sarnat Assessment* indicates evidence of Moderate or Severe encephalopathy	➡ Within first 6 hours of birth?	**Eligible to commence TH** **CSCF level 1–5 facilities:** Contact RSQ IMMEDIATELY on **1300 799 127**	**Not** eligible to commence TH

* **NB:** Delays >20 minutes in processing a cord blood gas may produce inaccurate results and should be confirmed if abnormal with a blood gas from the baby.

** **Ongoing resuscitation:** Positive Pressure Ventilation (PPV) and/or cardiac compressions for ≥10 minutes.

Consult a Neonatologist if any of the following apply:

- Mild encephalopathy is present.
- ^Gestational age 35+0 to 35+6 weeks: Requires discussion between Neonatologist, local team and parents.
- Birth weight <1800 grams.

Contraindications for Therapeutic Hypothermia (TH)

Do not commence if ANY of the following are present:

- Uncontrolled critical bleeding or coagulopathy.
- Uncontrolled hypoxia due to persistent pulmonary hypertension.
- Planned withdrawal of life-sustaining treatment.
- Major congenital abnormalities.
- Conditions requiring major surgery in the first 72 hours of life.

Signature Log (Every person documenting in this assessment **must** complete the signature on the first occasion of care)

Print name	Designation	Signature	Initials	Print name	Designation	Signature	Initials

DO NOT WRITE IN THIS BINDING MARGIN

ENCEPHALOPATHY SEVERITY (MODIFIED SARNAT) ASSESSMENT

v2.00 - 10/2026
WINC Code: 1NY42439
SW1208

Queensland Government

Encephalopathy Severity (Modified Sarnat) Assessment

(Affix identification label here)

URN:

Family name:

Given name(s):

Address:

Date of birth: Sex: ☐ M ☐ F ☐ I

Contact RSQ as early as possible to consult with a Neonatologist (Ph: 1300 799 127)

Modified Sarnat Assessment

- Complete this assessment in conjunction with the *Therapeutic Hypothermia (TH) Eligibility Checklist (page 1)*.
- Assess baby against each modified Sarnat domain.
- Complete assessment **hourly during the first 6 hours after birth**, or until a decision to commence TH is made.
- For each domain, record the highest severity observed:
  N Normal **Mild** Mild **Mod** Moderate **S** Severe **N/A** Not assessable
- Count and record the number of domains scored as Moderate or Severe at each assessment.

Assessment date: ..... / ..... / .....

Domain	Encephalopathy severity				Hours from birth/actual time (24hr)					
	Normal (N)	**Mild** (Mild)	**Moderate** (Mod)	**Severe** (S)	**1hr** HH MM	**2hr** HH MM	**3hr** HH MM	**4hr** HH MM	**5hr** HH MM	**6hr** HH MM
Level of consciousness (LoC)	Alert Able to arouse	Hyperalert	Lethargic	Stupor or coma						
Spontaneous activity	Normal	Normal or increased	Decreased	None						
Posture	Normal	Normal or mild distal flexion	Distal flexion; *OR* Complete extension	Decerebrate						
Tone*	Normal	Normal or increased in trunk and extremities	Hypotonia (focal or general)	Flaccid						
Suck reflex	Normal	Normal or incomplete	Weak	Absent						
Moro reflex	Strong	Strong, low threshold	Incomplete	Absent						
Autonomic system	PEARL Normal HR Normal respirations	PEARL Normal HR Normal respirations	Pupils constricted Bradycardia Periodic/irregular breathing	Pupils deviated/ dilated/non-reactive Non-variable HR Apnoea						
Number of domains scored as Moderate or Severe^										
Seizures observed? (Y/N)										
Result discussed with SMO, Neonatologist and/or RSQ? (Y/N)										
Completed by (clinician initials) *Complete the Signature Log (page 1)*										

* Assess tone in both limbs and trunk/neck. Presence of hypotonia in either meets the criteria.

^TH eligibility trigger: Three (**3**) or more domains scored as Moderate or Severe (without seizures); ***OR*** Two (**2**) domains scored as Moderate or Severe PLUS seizures can indicate Moderate or Severe encephalopathy and may be eligible for TH.

Source: Queensland Clinical Guidelines. (2026). *Hypoxic ischaemic encephalopathy (HIE)* (Guideline No. MN26.11-V13-R31). Queensland Health. www.health.qld.gov.au/qcg

Abbreviations

CSCF	Clinical Services Capability Framework	**PEARL**	Pupils Equal And Reactive to Light	**TH**	Therapeutic Hypothermia	**≥**	More than or equal to
HIE	Hypoxic-Ischaemic Encephalopathy	**PPV**	Positive Pressure Ventilation	**<**	Less than		
HR	Heart Rate	**RSQ**	Retrieval Services Queensland	**≤**	Less than or equal to		
LoC	Level of Consciousness	**SMO**	Senior Medical Officer	**>**	More than		

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