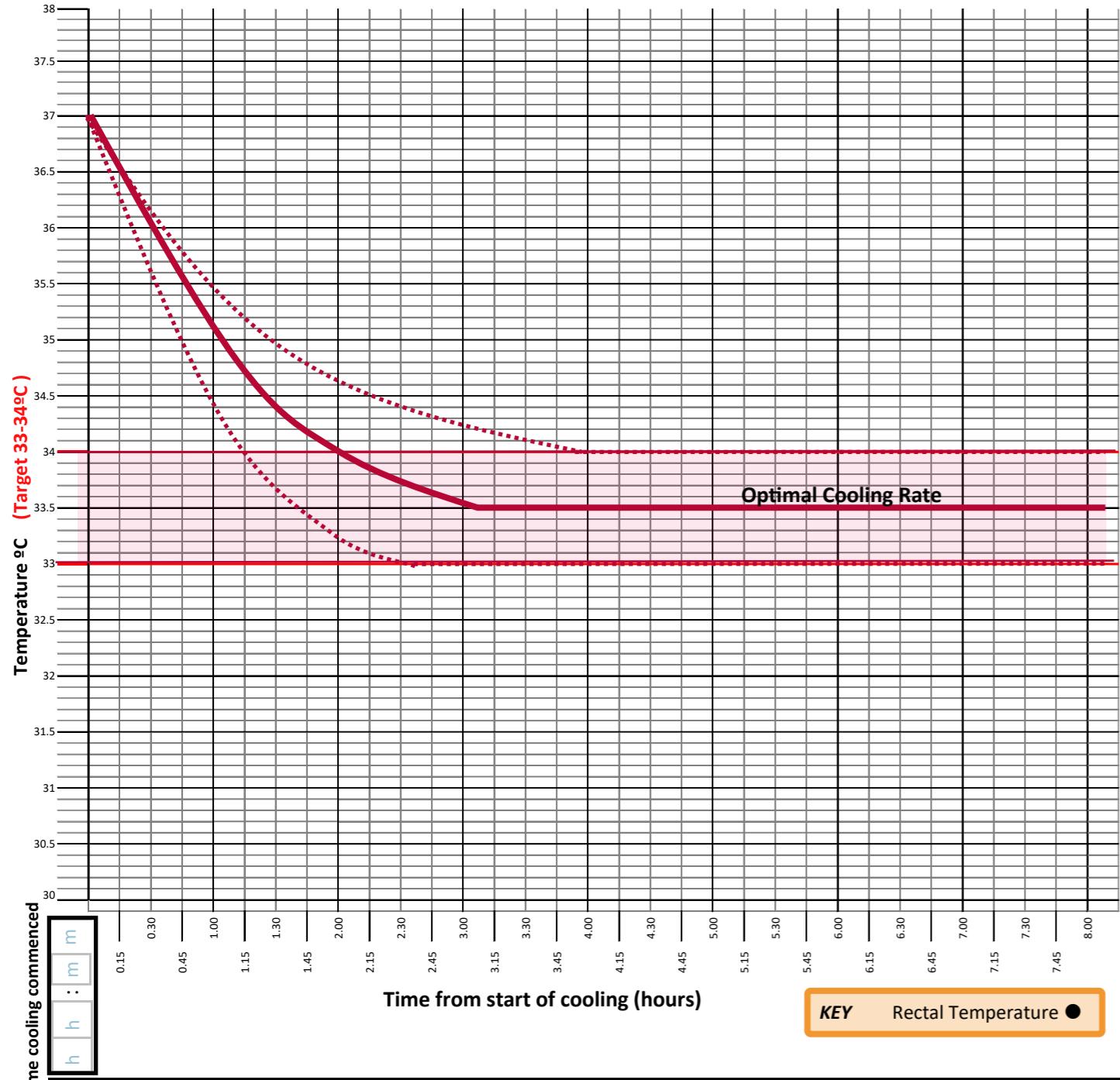


Neuroprotection Care Pathway (NCP1)
Diagnosis and Initial Management of HIE

Surname:
First names:
Date of Birth:
NHS.:
(use hospital identification label)

RECTAL TEMPERATURE MONITORING CHART IF PASSIVE COOLING USED



ACTIONS TAKEN TO ACHIEVE TEMPERATURE CONTROL	TIME	Sign/date
CAUTION from 34°C to avoid hypothermia (hat on, incubator to minimum)		

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Neuroprotection Care Pathway (NCP1)
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Surname:
First names:
Date of Birth:
NHS.:
(use hospital identification label)

Do you need to COOL?

Is the infant less than 6 hours old?

NO

Is the infant ≥ 36 completed weeks gestation?

NO

Does the infant have **AT LEAST ONE** of the following?

- APGAR score of ≤ 5 at 10 minutes after birth
- Continued need for **RESUSCITATION** at 10 minutes
- ACIDOSIS** pH < 7.00 within 60 minutes of birth (cord, arterial venous or capillary)
- BASE DEFICIT** ≥ 16 mmol/L within 60 minutes of birth (cord, arterial, venous or capillary)

YES

Is there altered state of consciousness (lethargy, stupor or coma **AND** at least ONE of the following)

- Clinical SEIZURES**
- ABNORMAL REFLEXES**
- HYPOTONIA**
- WEAK OR ABSENT SUCK**

YES

Atleast 30 min aEEG **AND** atleast ONE of the following

- Normal background with some seizure activity
- Moderately abnormal activity
- Suppressed activity
- Continuous Seizure activity

YES

Commence **COOLING** Name/Sign
Date & Time

See neonatal neuroprotection website www.bebop.nhs.uk for guidelines and paperwork

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Neuroprotection Care Pathway (NCP1)

Diagnosis and Initial Management of HIE

ADMISSION DETAILS

Time of Birth	<input type="text"/> h : <input type="text"/> m	<input type="text"/> h : <input type="text"/> m
Gestation	<input type="text"/> w : <input type="text"/> w	<input type="text"/> d : <input type="text"/> d
Sex	M	F
Birth weight	<input type="text"/> gm	
Head circumference	<input type="text"/> cm	
Admission temp	<input type="text"/> °C	

Resuscitated >10 minutes	Yes <input type="checkbox"/>	No <input type="checkbox"/>
First gasp (minutes)	<input type="text"/> <input type="text"/>	
Apgar Score (please write X if unknown)		
1 min	<input type="text"/>	5 min <input type="text"/>
10 min	<input type="text"/>	20 min <input type="text"/>
Blood gas results (worst set of results within 60 mins incl. cord blood)		
pH	<input type="text"/> . <input type="text"/>	pO ₂ <input type="text"/> . <input type="text"/> kPa
pCO ₂	<input type="text"/> . <input type="text"/> kPa	Base deficit <input type="text"/>

Pregnancy complications: None or please give details

Attach separate sheet if necessary

Mode of delivery: Pre-labour CS In labour CS SVD cephalic SVD breech Instrumental

Delivery complications: None or please give details

Congenital abnormalities apparent at birth: None or please give details

Attach separate sheet if nec.

NEUROLOGICAL STATUS

Neurological Examination	Time <input type="text"/> h : <input type="text"/> m		
Domain	Stage 1 (mild)	Stage 2 (moderate)	Stage 3 (severe)
Consciousness	Normal Hyperalert	Lethargic Decreased activity in an infant who is aroused and responsive Irritable to external stimuli	Stuporose/ comatosed Not able to rouse Unresponsive to external stimuli
Spontaneous activity	Active Vigorous does not stay in one position	Less than active Not vigorous	No activity whatsoever
Posture	Moving around Does not maintain only one position	Distal flexion, complete extension or frog – legged position	Decerebrate with or without stimulation (all extremities extended)
Tone	Normal – resists passive motion Hypertonic, jittery	Hypotonic or floppy, either focal or general	Completely flaccid like a rag doll
Primitive reflexes	Suck: vigorously sucks finger or ET tube Moro – Normal extension of limbs followed by flexion	Suck: weak Moro: incomplete	suck: completely absent Moro: completely absent
Autonomic system	Pupil – normal size Reactive to light Heart rate normal Respirations - normal	Pupils – constricted <3mm but react to light Heart rate: bradycardia (<100) Respirations: periodic irregular breathing effort	Pupils: fixed dilated, not reactive to light Heart rate: variable Respirations: apnoeic requiring IPPV
Seizure	none	Common focal or multifocal seizures	Uncommon (excluding decerebration) Or frequent seizures

Time Cranial USS done	<input type="text"/> h : <input type="text"/> m
Resistance Index	<input type="text"/> . <input type="text"/>
US showed	<input type="text"/> <input type="text"/>
Time CFM started	<input type="text"/> h : <input type="text"/> m
CFM showed	<input type="text"/> <input type="text"/>
If required or borderline for cooling. Neurological examination 2 Time <input type="text"/> h : <input type="text"/> m	
Neurological examination 3 Time <input type="text"/> h : <input type="text"/> m	

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Neuroprotection Care Pathway (NCP1)

Diagnosis and Initial Management of HIE

CLINICAL MANAGEMENT

CLINICAL MANAGEMENT CHECKLIST	✓	Sign/date/time
Actively manage blood pressure to maintain within normal range	<input type="checkbox"/>	ONGOING
Avoid hyper/hypocapnoea	<input type="checkbox"/>	ONGOING
Restricted fluids (unless clinically indicated)	<input type="checkbox"/>	
Maintain blood sugar within normal range	<input type="checkbox"/>	ONGOING

TRANSFER REFERRAL (IF REQUIRED)

TRANSFER CHECKLIST (for infants born outside of Regional NICU)	✓	Sign/date/time
Refer to PaNDR for transfer to Regional NICU ASAP	<input type="checkbox"/>	
Full handover to PaNDR including this form (original in local notes)	<input type="checkbox"/>	

PARENTAL INVOLVEMENT

PARENTAL INVOLVEMENT CHECKLIST	✓	Sign/date/time
Parents spoken to by the most senior member of the medical staff on site (information in HIE Guidelines)	<input type="checkbox"/>	
Parents given the opportunity to see the baby	<input type="checkbox"/>	
Parents given a Parental Information leaflet	<input type="checkbox"/>	
Parents receive a picture of their baby	<input type="checkbox"/>	

TEMPERATURE CONTROL

TEMPERATURE CONTROL CHECKLIST	✓	Sign/date/time
Continuous rectal temperature monitoring started	<input type="checkbox"/>	
Rectal temperature documented every 15 minutes (chart overleaf)	<input type="checkbox"/>	ONGOING

	Time	Team (Referring Unit / ANTS /Receiving Unit)
Passive Cooling: (time started)	<input type="text"/> h : <input type="text"/> m	
Active Cooling: (time started)	<input type="text"/> h : <input type="text"/> m	
Time TARGET TEMPERATURE consistently maintained (33.0°C-34.0°C)	<input type="text"/> h : <input type="text"/> m	

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