KWAZULU-NATAL PROVINCE
HEALTH
REPUBLIC OF SOUTH AFRICA

CLINICAL AUDIT: ENCEPHALOPATHY (NEONATAL)

Date:		Unit:	

Definition:

Neonatal encephalopathy (NNE) is a disorder of brain dysfunction presenting with a wide spectrum of clinical signs. Features include:

- Altered level of consciousness (hyperalert /irritable/lethargic/difficult to arouse)
- Abnormal tone and primitive reflexes
- Seizures (abnormal posturing/staring/blinking/yawning)
- Difficulty in initiating and maintaining respiration (respiratory distress/abnormal breathing pattern /weak or absent cry/ apnoea).

It is a leading cause of morbidity and mortality and consequent litigation.

Method:

1. All encephalopathy cases must be audited.
2. Record the final score on the monthly clinical and record audit summary tool for Encephalopathy and on the HIE table on the Obstetric data sheet for the consolidated death report.
3. Ensure an action plan is drawn up monthly.

Not applicable (NA):	Does not apply to the unit or individual assessment.
Non-Compliant (NC):	Not documented or not done
Compliant (C):	Fully compliant

RESUSCITATION:		NA	NC	C	COMMENT
1.	Baby not breathing in golden minute identified				
2.	If not breathing ventilated with bag/valve mask within 1 minute				
3.	Initially resuscitated with air not oxygen				
4.	Baby only suctioned for audible/visible secretions in airway				
5.	Duration of resuscitation documented				
6.	If Apgar score <7 at 5 mins -Cord/arterial blood gas taken within 1 hr of birth				
	RESUSCITATION Totals (6):				

ASSESSMENT AND PLANNING-ADMISSION		NA	NC	C	COMMENT
Admission assessment					
7.	Assessed by an MO within 1 hr of admission				
8.	Neonatal encephalopathy management checklist commenced				
Admission Investigations					
9.	Cord blood or arterial blood gas taken within 1 hr of birth.				
10.	Urine dipstix assessed				
11.	Blood taken for assessment of infection-FBC, CRP & Culture				
12.	**IF** baby had seizures/abnormal WCC/ raised CRP- ✓ Lumbar puncture performed				
13.	U&E taken after 24-48hrs				
14.	Neuro-imaging 72 hours after birth ✓ Cranial ultrasound performed				
	ASSESSMENT AND PLANNING-ADMISSION totals (8):				

ASSESSMENT AND PLANNING-ONGOING		NA	NC	C	COMMENT
Nursing Assessment					
15.	Normothermia maintained				
16.	Blood glucose monitored 3hrly for 1st 24hrs and then as indicated on chart and PRN				
17.	Oxygen saturations recorded at least 3hrly				
18.	BP monitored 3hrly				
19.	Abnormal assessments identified, acted upon & reassessed in 1hr				

ASSESSMENT AND PLANNING-ONGOING cont.		NA	NC	C	COMMENT
Medical Assessment					
20.	Reviewed twice daily by MO on day of admission and while unstable				
21.	Sarnat and Thompson score completed daily				
22.	Investigations reviewed and actioned				
23.	Once stable assessed daily. Problem list, examination, assessment and management plan updated				
24.	Definitive diagnosis obtained				
25.	Referral center consulted if diagnosis uncertain				
	ASSESSMENT AND PLANNING-ONGOING totals (11):				

IMPLEMENTATION/ MANAGEMENT		NA	NC	C	COMMENT
General					
26.	Parents are fully informed/counselled of diagnosis and findings and on-going condition of baby				
27.	Multidisciplinary team input recorded				
Medications					
28.	Pen G/Ampicillin and Gentamycin commenced on admission				
29.	Antibiotics discontinued after 72 hrs if baby is well, CRP & FBC normal and no growth on culture				
30.	Changed to Cefotaxime if meningitis confirmed on CSF or suspected but LP unsuitable.				
	IMPLEMENTATION/ MANAGEMENT Totals (5):				

Nutrition		NA	NC	C	COMMENT
31.	NPO until blood gas & BP stable & stool /bowel sounds present				
32.	Normal daily fluid volumes given (neonatalyte)				
33.	If NPO > 3 days-referral centre consulted on day 4/TPN commenced				
34.	If mean arterial blood pressure (MAP) low (< 40 mmHg)- SINGLE bolus of 10ml/kg 0.9% Saline or Modified Ringers Lactate given				
	NUTRITION Totals (4):				

Seizure management					
35.	Date and time of first seizure documented				
36.	Seizure activity documented-frequency and duration				
37.	Seizures managed according to guideline				
38.	If seizures persisted- further management given in consultation with paediatrician/neonatologist				
39.	When seizures stopped- loaded and then maintained with Phenobarbitone PO				
	SEIZURE MANAGEMENT Totals (5):				

TRANSFER/DISCHARGE/DEATH					
40.	Palliative care plan in place including pain management and resuscitation plans (discussed with parents)				
41.	Follow up bookings documented and discussed with mother				
	TRANSFER/DISCHARGE/DEATH Totals (2):				

Subtotals brought forward	NA	NC	C	Total Possible Score	Compliant Total Score	X100=%
Resuscitation				6-NA		%
Assess. & planning -Admission				8-NA		%
Assess. & planning -Ongoing				11-NA		%
Implementation/Management				5-NA		%
Nutrition				4-NA		%
Seizure Management				5-NA		%
Transfer/Discharge/Death				2-NA		%
Final Score:				41-NA		%

ASSESSED BY:		**Date:**	
Paediatrician Sign:		**Print:**	
MP No.			
Neonatal unit nurse Sign:		**Print:**	
SANC No.			
Sign:		**Print:**	