KWAZULU-NATAL PROVINCE
HEALTH
REPUBLIC OF SOUTH AFRICA

CHECKLIST: SPECIFIC INFECTIONS

Name:		**IP Number:**	

The purpose of this management checklist is to guide an appropriate and acceptable standard of management and care for specific neonatal infections. It should be started immediately for any baby with signs of possible infection.
Should be used together with the following Management Checklists as indicated: Neonatal Infections; Necrotising enterocolitis; Tuberculosis and Tetanus
It is aimed at nurses and junior/inexperienced medical practitioners.
Individual critical clinical judgment should always be used. It does not replace individualized expert management.

Does the baby have signs of a possible congenital or other specific condition?			✓
Confirmed antenatal/current infection in mother		Hydrops (oedema/ascites)	
Growth restriction **plus** any other sign		Microcephaly	
Anaemia		Jaundice (conjugated)	
Petechiae (small red spots-bleeding into the skin)		Skin rash	
Bony changes on long bone X-Ray		Adenopathy (swollen glands)	
Hepato-splenomegaly (enlarged liver and spleen)		Thromobocytopaenia (low platelets < 150 x 10^9/L)	
Possible local infection (eye/umbilical/skin)		Possible bacterial/fungal/chemical	
Sign:		**Print:**	
Date:		**Time:**	

Congenital infections: (STORCH-Syphilis, Toxoplasmosis, Other, Rubella, CMV, Herpes)	✓
Consult referral centre for any suspected congenital infection	

Syphilis:				✓
Specific signs:	Runny nose (snuffles)		Large pale placenta	
	Rash (blisters) on palm & soles			
Investigations:	Repeat RPR on mother even if -ve before		Placental pathology (if available)	
	X-Ray long bones - possible changes to the long bones include:			
	Translucent metaphyseal bands (dark band)		Periosteal reaction (thickening & elevation off bone)	
	"Rat Bites" on the metaphysis		Diaphyseal changes - black "punch holes "	
Treatment:	Submit Notification of Medical condition		Treat mother and father	
	1. **Asymptomatic AND** mother partially/untreated: **Give** Benzathine Penicillin **IMI** 50 000 u/kg x 1 dose			
	Mother is partially treated if:		i. She received <3 doses penicillin **OR**	
	ii. Was treated without penicillin **OR**		iii. Treatment started within 4 weeks of birth	
	2. **Symptomatic**: Give **10 days** of Penicillin - **either** of the below:			
	Benzyl Penicillin 50 000 u/kg/dose **IVI** 12 hrly		**OR** Procaine Penicillin 50 000u/kg **IMI** daily	
	NB. If the course of Penicillin is interrupted for >24 hours – restart from the beginning			
Sign:			**Print:**	
Date:			**Time:**	

Toxoplasmosis				✓
Specific signs:	Generalised intracerebral calcifications and hydrocephalus			
Investigations:	Placental histology (if available)		STORCH screen (serial IgA and IgM titres)	
Treatment:	Discuss with referral centre			
Sign:			**Print:**	
Date:			**Time:**	

Rubella					✓
Specific signs:	Persistent patent ductus arteriosus (PDA) and cataracts				
Investigations:	Urine for Rubella PCR				
Treatment:	No treatment (but baby very infectious)		Isolate and exclude any pregnant women		
	Check sight and hearing		Developmental follow up		
Sign:			**Print:**		
Date:			**Time:**		

Cytomegalovirus (CMV):				✓
Specific signs:	**CNS:**	Microcephaly, chorioretinitis, radiological abnormalities		
	Organ disease:	Hepatitis, pneumonitis, bone marrow suppression		
Investigations:	Urine for CMV PCR			
Treatment:	**Symptomatic:**	Gancyclovir 6 mg/kg 12 hourly **IVI** over 1 hour Change to **oral** Valgancyclovir once feeds well tolerated		
	Clinically stable:	Valgancyclovir 16 mg/kg twice daily **PO**. Continue for **6 months**		
Sign:			**Print:**	
Date:			**Time:**	

Herpes:	More common in preterm infants and usually develops 3-10 days post-delivery.			✓
Specific signs:	Skin, Eye, Mouth (SEM) lesions.			
	Presence of pyrexia and aseptic meningitis			
Treatment:	Acyclovir 20 mg/kg/dose **IV** 8 hourly (12 hourly if <34 weeks or if in renal/hepatic failure)			
Duration:	Skin / mucous membranes: **14 days.**		Meningo encephalitis / Disseminated: **21 days**	
Sign:			**Print:**	
Date:			**Time:**	

Local Infections:			
Conjunctivitis:			✓
1. Neisseria gonorrhoeae:	Early Presentation mainly on day 1 up to Day 5. **Medical emergency!**		
Signs:	Severely red, swollen and discharging eyes.		
Investigations:	Eye swabs for gram stain before commencing antibiotics. (Clean eye first with saline to remove pus)		
Treatment:	Irrigate eye **hourly** with saline or penicillin eye drops until discharge clears.		
	Local infection	Cefotaxime 100 mg/kg/IVI **single** dose	
	Systemic infection	Cefotaxime 50 mg/kg/dose IVI three times daily for 7 days (14 days for meningitis)	

2. Unknown organism:	Intermediate presentation 2 - 10 days	
Signs:	Sticky eye - no conjunctival inflammation	
Investigations:	Eye swabs for gram stain before commencing antibiotics. (Clean eye first with saline to remove pus)	
Treatment:	Clean eyes with saline before applying the following:	
	Ophthalmic Chloramphenicol 0.5% **drops**-one drop 4 hourly during the day until resolved	
	AND Chloramphenicol 1% **ointment** once at night	

3. Chlamydia:	Late presentation from Day 5 - 14 (up to Day 60)		
Signs:	Serosanguinous/mucoid discharge with swollen eyelids & enlarged eye blood vessels.		
Investigations:	Firmly swab the everted lower eye lid using a virology swab. Place in VPSS transport medium		
Treatment:	Azithromycin 10 mg/kg/dose IV/PO daily **for 3 days**		
Sign:		**Print:**	
Date:		**Time:**	

Skin infection – Staphylococcus aureus (scalded skin syndrome):					✓
Signs:	Pustular lesions that burst leaving dry reddish skin. When severe can look like burns.				
Investigations:	Urine, skin (belly button) and blood cultures.				
Treatment:	Flucloxacillan 25 mg/kg/dose PO 6 hrly for 7 days				
	If baby is sick:	Refer to secondary hospital			
		Give Cloxacillin 50 mg/kg/dose IVI 12 hourly (1st 2 weeks) or 8hrly (2 - 4 weeks) for 5 days			
		If Fluclox/Cloxacillin not available give Cefazolin: ≤2 kg 25 mg/kg/dose slowly IV /IM 12 hrly (1st week) or 8hrly thereafter >2 kg 50 mg/kg/dose slowly IV /IM 12 hrly (1st week) or 8hrly thereafter			
Sign:			**Print:**		
Date:			**Time:**		

Umbilical infection:				✓
Signs:	Purulent discharge or signs of periumbilical cellulitis (for example, redness, ↑skin warmth or swelling)			
Treatment:	1st line antibiotics			
Sign:		**Print:**		
Date:		**Time:**		

Other infections:					
Chorioamnionitis: NB. Offensive liquor does not equal Chorioamnionitis.					✓
Confirmed maternal diagnosis:	Persistent maternal pyrexia **plus** 2 of the following:				
	Uterine tenderness		Foetal/maternal tachycardia		
	Raised WCC		Purulent discharge		
Investigations:	Take FBC, CRP & blood culture from baby				
Treatment:	Baby asymptomatic & mum received antibiotics (A/B):		Observe with mother awaiting results.		
	Baby symptomatic **OR** no maternal A/B:		Admit to neonatal Unit. Start 1st line A /B.		
Sign:		**Print:**			
Date:		**Time:**			

Systemic fungal infection: Common and difficult to prove (mainly Candida)					✓
Assumed fungal infection?	**Scenario 1** - Nonspecific features of sepsis **PLUS** incidental fungal growth on blood culture. **OR**				
	Scenario 2 - Nonspecific features of sepsis with **NO** growth on blood culture **BUT** no improvement on antibiotics **AND** low platelet count (100 X 10^9/L) or 50% drop in platelets.				
Investigations:	Blood culture (B/C)		Urine culture		
	CSF culture				
	Repeat B/C every 5 days. Clearance of infection proved after one negative culture.				
Treatment:	**Remove central lines.** Use peripheral lines until blood cultures negative.				
	Fluconazole PO or IV (Use undiluted IV solution if oral solution not available). Infuse over 30 mins				
	≤ 2 weeks old:	12 mg/kg loading dose Then 6 mg/kg/day			
	> 2 weeks:	24 mg/kg loading dose Then 12 mg/kg/day			
	Scenario 1:	Repeat B/C every 5 days until negative. Stop Fluconazole 14 days after negative culture			
	Scenario 2:	Repeat B/C after 5 days. See below:			
	If positive: Treat as for Scenario 1		If negative: Consult referral centre		
Sign:			**Print:**		
Date:			**Time:**		

Group B Streptococcus: May be early or late onset.			✓
Signs:	Early presents with 24 hours usually as sepsis (80%), pneumonia or meningitis.		
Treatment:	Asymptomatic baby. Mum received antibiotics:	Monitor with mother	
	Asymptomatic baby. No maternal antibiotics:	1st line antibiotics. Discontinue after 48hrs if CRP is normal, no growth on culture **AND** baby clinically well	
	Symptomatic baby:	1st line antibiotics until culture result available	

Meconium Aspiration: See Respiratory Management checklist for detailed management.					✓
Signs:	Respiratory distress, cyanosis and hypotonia in the presence of meconium stained liquor				
Investigations:	Chest X-Ray: patchy or streaky areas		Auscultation: coarse, crackly breath sounds		
	Blood gas: Respiratory acidosis				
Treatment:	1st line antibiotics. Stop antibiotics if 48hr CRP <10, no growth on blood culture and baby clinically well				
Sign:			**Print:**		
Date:			**Time:**		

Meningitis:					✓
Assess for Meningitis if there are any one of the following:	Initial CRP ≥20 or FBC: WCC<5 or >32		At 48hrs baby is not improving or has deteriorated		
	Baby has a positive blood culture		There are central nervous system signs. See below:		
	Lethargy		Vomiting		
	Seizures		Nuchal rigidity		
	Irritability		Bulging / full fontanelle		
Investigations:	Lumbar puncture				
Treatment:	1. Commence 1st line antibiotics while awaiting LP result.				
	2. If the microbiology and chemical LP results are suggestive of infection:				
	Increase Ampicillin to 100 mg/kg		Stop Gentamycin		
	ADD Cefotaxime 50 mg/kg/dose.				
	First week of life: **12 hourly**		2nd- 3rd week: **8 hourly**		
	Thereafter: **6 hourly**				
Duration:	Once LP culture is available:				
	Culture negative: 10 days of antibiotics (A/Bs)		Culture positive - See below:		
	Sensitive to Cefotaxime: 10 days A/Bs		Not sensitive to Cefotaxime - See below:		
	Treat according to sensitivity **AND**		Consult referral centre for duration & further investigations		
Sign:			**Print:**		
Date:			**Time:**		

Prolonged rupture of membranes >18 hours		✓
Asymptomatic:	No investigations or treatment	
Asymptomatic with history of Chorioamnionitis /offensive liquor:	Septic screen and 1st line ABs	
Symptomatic:	Septic screen and 1st line ABs	

Authorized By:		Prof NH McKerrow - KZN Provincial Paediatrician	
Date:	September 2021	**Review Date:**	2024