

## Cert Nephrology(SA) Paed Blueprint

	Mar 2007	Aug 2007	Sep 2008	Mar 2009	Mar 2010	Sep 2011	Mar 2012	Sep 2013	Oct 2014	Oct 2015	May 2016	Oct 2016	May 2017
EPIDEMIOLOGY and RESEARCH	2007	2007	2008	2009	2010	2011	2012	2013	2014	2013	2010	2010	2017
Incidences (and mortality rates)													
End stage renal failure/CRF in children in SA													
Acute renal failure in SA													
Outcomes of ARF with CRRT vs conventional RRT													
ETHICS													
Ethical dilemmas in transplantation													
Decision not to offer dialysis													
Withdrawal of renal replacement therapy /End of life care									25		10		
HIV and ESRF													
Chronic dialysis for newborn													
Embriology and anatomy													
Development of kidney /urinary tract						10		10					
Abnormal embryology –development multicystic kidney													
Kidney of small for gestational age infant											10		
Genetics													
Genetics of Nephrotic syndrome													
Genetics of other inherited kidney diseases, eg, cystic kidney													
diseases, ARPKD and ADPKD, Juvenile nephronophthysis,													
glomerulocystic kidney disease													
Differential diagnosis cystic kidney disease					12.5								
	Mar 2007	Aug 2007	Sep 2008	Mar 2009	Mar 2010	Sep 2011	Mar 2012						
Genetics of Alport								5					
Physiology and pathology /pathogenesis													
Kidney function in newborn/premature		7							10				
Sodium balance in newborn	9	9											

Urine production in premature				5						
Factors that influence GFR	10			3						
Hypernatraemia	5			10		14				
Hyponatraemia	5			10		17				
Renal glycosuria (causes/pathogenesis	3				15					
Calcium phosphate homeostasis					13				10	
Pathogenesis of nephrocalcinosis/nephrolithiasis					20				10	
Pathgenesis dysplidaemia					20			10		
Disorders of acid base balance alkalosis / acidosis		25					5	10		
Functions of the kidney (fluid and electrolytes and other re blood		20					10	10		
pressure and endocrine							10			
	15									
Polyuria and dehydration Structure and function of GBM	13	10								
	9	10								
Function of podocytes	7									
Podocyte injury	/	15								
Pathogenesis of proteinuria		15								
Etiology of congenital NS			5		10					
Hypercoaguability of NS					10		-			
Pathogenesis of oedema / nephrotic syndrome			10		45		5			
Complement inhibitor deficiency and HUS			10		15					
Pathophysiology of HUS and TTP							10			
Causes of HUS			8							
Pathogenesis of pulmonary haemorrhage in ARF				5						
Pathogenesis of anaemia in CRF					10					
Pathogenesis CKD MBD / FGF-23		10		10				10		
Iron metabolism in CRF										
Renal tubular diseases, eg cystinosis		12.5					5		10	
Pathology of renal tubular acidosis										
Pathogenesis of hypophosphataemia			12.5							
Pathogenesis of renal failure in cirrhosis			12.5							
Pathology of voiding dysfunction			10				5			
Pathogenesis of RAS in hypertension					18					

Histopathology / pathogenesis											
PUV											
VUR		12.5									
HIV nephropathy								10			
Classification of Lupus nephropathy							10				
Histopathology of SLE					5			5			
FSG		12.5				5					
INS/ MCNS / Membranoproliferative GN / IgA, other GN								10	10	10	
Pathology of membranous Nephropathy/C3 glomerulopathy									10		
Histopathology of Alport syndrome							10				
Transplant rejection /dysfunction		12.5									
Anti body mediated Tx rejection					5						
CMV in Transplant rejection	15										
Histopathology of drug toxicity including CNI toxicity											
Pathogenesis of CKD								12.5			
Diagnostics											
Pyuria							8				
Assessment of GFR (renal function) in Children	15										
Causes of ARF											
ARF in immature kidney		9			15						
RIFLE criteria						10					
Biomarkers for diagnosis of AKI						8					
Creatinine as marker for AKI						7					
Renal vein thrombosis in neonate					5						
Work up of ARF and pulmonary haemorrhage					5						
Work up of ARF with anaemia					25						
Diagnosis of CRF /monitoring		12.5									
Work up of anaemia of CKD						20					
Work up of haematuria			25				12			25	
Work up of polyuria/dehydration								5			
Work up of proteinuria											
Work up/classification VUR				8							
Work up of antenatal hydronephrosis					10						
Work of classic obstructive kidney disease PUV /PUJO									10	25	
Work up of voiding dysfunction and enuresis				5	5		12	25			
Interpretation of uroflow patterns							5				
Investigations, eg sonars and radio-isotopes								5			
Work up of cystic kidney diseases				12.5					25		
Role of kidney biopsy (indications)		7									
Risks of kidney biopsies		9							10		
Diagnosis of CKD MBD			5							10	

Work up of hypertension in children of diff ages / causes of HT			12.5							
Pharmacology: Drugs Mechanisms of action and adverse										
effects										
Drug metabolism and toxicity										
Drug toxicity in newborns	12.5									
Vancomycin										
Aminoglycocides										
Diuretics	25					15				
Carbapenems										
Penicillins										
Amphotericin										
Mechanism of drug action Tx drugs				10						
Cyclosporin/Tacrolimus						15	10			
Rituximab							10		5	
Rituximab in renal Tx					5					
Plasmapheresis										
Immunoglobulin									5	
Erythropoietin										
ACEI/ARB /Renin inhibitors					7					
Vitamin D (DHT and One Alpha)										
NSAID										
NSAID in immature kidney				5						
Inotrope use										
Contrast drugs										
Clinical features (paper II) and complications of										
NICE guidelines for UTI <2 year olds					20					
Features of ESRF (uraemia)		10								
Features of CKD MBD		5								
Congenital NS /Other NS			5							
Ambulatory BPM (uses and indications					5					
Alport Syndrome						6				
Associated system signs in GN							10			
Treatment /Management										
Management of hypernatraemia						11				
Management renal vein thrombosis				5						
Treatment of Bartter					5					
Management of renal glycosuria					5			25		
Management of Alport						4				
Management of VUR	12.5									
Treatment options for different categories of SLE and side						10				
effects										

UTI				17					10		<del> </del>	
Voiding dysfunction				10	5		8	5				
Management of congenital NS / other NS				15				5				
Hypertension / crises /emergency /chronic/chronic /		25	25	12.5						10		
renovascular												
Management of CKD								12.5				
Cystinosis			12.5							10		
Treatment of nephrolithiasis /nephrocalcinosis						5			10			
Hypophosphataemia				12.5								
Tumour lysis								10				
CKD /AKI interconnected / risks			25						25			
Management of hyperphosphataemia/ CKD MBD			10									
Acute renal failure								10				
APSGN complicated		9										
Treatment of renal failure in cirrhosis				12.5						25		
Treatment of atypical HUS (Complement deficiency mediated)				7								
Diff Diagnosis and management SLE relapse					20							
Dialysis Modalities			10									
Dialysis acute										10		
Dialysis chronic												
Indications for acute dialysis			5									
Complications of dialysis									10	15		
Causes and Management of hypotension in HD					10							
Assessment of adequacy HD							6					
Methods of calculation of Kt/V							6					
TRANSPLANTATION									25			
Work up of Transplant dysfunction		12.5			10							
Causes of graft failure						10						
Differential diagnosis of TX dysfunction					8							
Management of Tx dysfunction		12.5			7							
CMV Prophylaxis in allograf rejection	10											
Treatment of antibody mediated Tx rejection					5							
Transition care												
Differences Adults/Paeds							5					
How to manage /							12					
Managing non adherence							8					
Total	200	200	200	 200	200	200	200	200	200	200		