

Improving maternal & child healthcare worldwide

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August 2021 Curriculum for training for paediatric clinicians in advanced hospital paediatrics

Components:

Foundation COURSE: – To be delivered in the first 6 weeks of the Training Program. SEE ATTACHED

Paediatric E-library Including updates and videos, this library is available on application on the MCAI G-Drive and will be installed on the Chromebooks of all trainees and trainers.

Advanced Training: – To be delivered by both tutorial-supplemented and apprenticeship-based training over 24 months during which the paediatric clinicians will complete the following educational processes:

Assessment Methods and Materials which will form the cornerstone of assessment

- Intervention procedure logbook
- o Objective Structured clinical examination (OSCE) at the end of the first year
- Tutorials on the subjects in the curriculum below will occur twice weekly and be conducted by international experts. They will be followed by twice weekly examinations and reviews of the results occurring in the subsequent week

Undertaking of the following paediatric procedures/interventions initially in collaboration and always under the supervision of local Liberian and International trainers and gradually progressing to be able to undertake these procedures safely as the lead paediatrician with the local Liberian and international paediatricians as assistants/observers.

1. Undertake neonatal resuscitation with ability to provide airway opening, bag and mask



- ventilation, jaw thrust, chest compressions, adrenaline (see Neonatal handbook Section 1)
- 2. Airway procedures including oropharyngeal airway, cricothyroidotomy. Section 90 Handbook 1
- 3. Breathing procedures including use of metered dose inhaler, use of a nebuliser, emergency needle thoracocentesis, chest drain insertion, pleural tap, assessment of respiratory failure, safe oxygen use, high flow, high humidity nasal cannula oxygen, CPAP, bag and mask ventilation, emergency intubation. Section 91 Handbook 1 PI 24
- 4. Circulatory procedures including peripheral venous cannulation, blood sampling, external jugular vein cannulation, long saphenous vein cannulation, intra-osseous needle insertion, needle pericardiocentesis, defibrillation, AED use. Section 92 Handbook 1 VIDEOS C3, C4, C6, C7, C8, C9, C10
- 5. Insertion of an orogastric or nasogastric tube. Section 93 Handbook 1 Video PI 7
- 6. Cervical spine immobilisation and log roll. Section 94 Handbook 1 Videos T 2, T 3, T 6
- 7. Incision and drainage of an abscess. Section 95 Handbook 1
- 8. Lumbar puncture. Section 97 Handbook 1
- 9. Suprapubic aspiration of urine. Section 98 Handbook 1
- 10. Measuring blood glucose level. Section 99 Handbook 1
- 11. Microscopy of the urine. Section 61 Handbook 2
- 12. Chest physiotherapy. Section 62 Handbook 2
- 13. WHO treatment plans A, B, C for acute diarrhoea Section 63 Handbook 2
- 14. Procedures in children: analgesia, giving injections, restraining/wrapping Video PI 7, PI 8, PI 17
- 15. Skin to skin care (KMC) Video PI 11
- 16. Respiratory physiology. Videos PH 2 and PH 3

Reading about and understanding from the first 10 sections of Handbook 2 the following issues regarding the hospital care of children:

- 1. Hospital management including infection control Video A7 Section 1 Handbook 2
- 2. Identifying and managing children who have been abused Section 2 Handbook 2
- 3. Nursing sick children and the Child Friendly Healthcare Initiative. Section 3 Handbook 2
- Nursing adolescents, including those who are pregnant Video A4 Section 4 Handbook
- 5. Managing the child with a disability in hospital Section 5 Handbook 2
- **6.** Facilities in hospital for children with special needs and learning difficulties Section 6 Handbook 2
- Palliative care for children in communities in resource limited settings Section 7
 Handbook 2
- 8. Medical ethics and professional standards Section 8 Handbook 2
- 9. Medical records, history taking and clinical examination Section 9 Handbook 2
- **10.** Traditional medicine its relevance to hospital care for children and its dangers. Section 10 Handbook 2



There will be twice-weekly examinations on the above 13 practical procedures and 10 issues regarding hospital care.

If the paediatric clinician is successful after this first 18 months of training, he/she will undertake a further 6 months of internship in a public hospital under supervision of a Liberian trainer. If successful at this stage, he/she will obtain a 5-year license to practice in public hospitals in Liberia assigned by the MOH.

Knowledge Base:

The Primary knowledge base for each component of the curriculum is shown below. Note — trainee's will be encouraged to read around the subject and this core knowledge should be supplemented by clinical and self-directed learning. The paediatric E-Library is provided on the Chromebook of each trainee and contains relevant videos and publications and is updated every 6 months.



Components and training forms for completion

Component 1: KNOWLEDGE OF NORMAL VITAL SIGNS DATA FOR CHILDREN OF DIFFERENT AGES		
SKILL	Knowledge base	Evidence base (any one or all methods can be used Objective Structured clinical exam (OSCE) Videos and E-Library)
Normal values for vital signs	SECTION 2 Handbook 1	
Drug and fluid administration	Section 7 Handbook 1	N56
Normal oxygen saturation levels (SpO2) at sea level and at altitude	Section 64 Handbook 2	
Paediatric Advanced Warning Score PAWS for different ages in low resource settings	Section 68 Handbook 2	

Component 2: STRUCTURED APPROACH TO MANAGING EMERGENCIES IN CHILDREN		
Knowledge base	Videos	
Section 3 Handbook 1 and		
Section 11 Handbook 2		
	AC21, AC13	
Section 4 Handbook 1 and Section 12 Handbook 2	AC22	
Section 12 Hallabook 2		
	Knowledge base Section 3 Handbook 1 and Section 11 Handbook 2	



Component 2: STRUCTURED APPROACH TO MANAGING EMERGENCIES IN CHILDREN		
Advanced Life Support	Section 5 Handbook 1 and	
CABC	Section 13 Handbook 2	
Oxygen treatment		
Oropharyngeal airways		AC25, AC26
Self-inflating bag and masks		AC1, AC2, AC31
Chest tubes		AC4
Gastric tubes		
Management of cardiac arrest in children		AC15, AC16
Four cardiac arrest heart rhythms		
The 4Hs and the 4Ts		
Non-shockable cardiac arrest		
Shockable cardiac arrest		
Automatic external defibrillators (AEDs)		
Drugs used in non-shockable and shockable cardiac arrest		
When to stop resuscitation?		AC7 AC/ AC40 AC22
Tracheal intubation	Section 60 Handbook 2	AC7, AC(, AC40, AC23, AC27, AC34, AC24, AC28, AC29, AC30, AC33
SBAR: Situation, Background, Assessment and Recommendation	Section 6 handbook 1	
High-dependency care	Section 14 Handbook 2	
Drug and fluid administration	Section 7 Handbook 1	
Safe blood transfusion	Section 8 Handbook 1 and Section 54 Handbook 2	
Pain control	Section 9 Handbook 1	A3 Lack of morphine in Africa



Component 3: IDENTIFYING AND MANAGING CHILDRE	N WHO HAVE BEEN ABUSED	
SKILL	Knowledge base	Videos
Categories of ill treatment and abuse	Section 76 Handbook 1	A8 Stop violence before
1. Unintentional III treatment resulting from human fallibility		it starts
2.Ill treatment resulting from stress		
3. Abuse that is undertaken for gain		
Features of family members known to be associated with ill treatment or abuse		
Critical threshold for concern		
Child Rights;	Section 2 Handbook 2	A1 You have the power
Presentation suggesting possible ill treatment or abuse.		
Physical Abuse (Non- Accidental Injury); Emotional		
and Psychological Abuse; Neglect; Child Sexual Abuse; Fabricated and/or induced illness;		
Immediate Action when III Treatment or Abuse is suspected;		
Diagnosis of Child Sexual Abuse		
Acute Sexual Assault Findings (within hours or a few days)		
Non-acute findings / historic Sexual Abuse		
Additional considerations when performing		
examination of the genital and anal areas		
Forensic sampling in acute sexual assaults		
Sexually Transmitted Infections (STIs)		



Component 3: IDENTIFYING AND MANAGING CHILDREI	N WHO HAVE BEEN ABUSED	
Fabricated or Induced Illness (FII) Investigations to exclude medical causes;		
Medical aftercare following child abuse		
Abuse in special circumstances: Child trafficking;	A6 E	mergency
Rape as a Weapon of War. FGM; Types 1, 2, and 3	care	in war
Implications and complications (short and long term).	zone	e Syria
Safeguarding children at risk.		
Examination under child protection procedures		
including charts for recording examination findings		

Component 4: DANGEROUS VIRAL INFECTIONS REQUIRING EMERGENCY TREATMENT		
Knowledge base	Videos	
Section 10 Handbook 1		
Section 11 Handbook 1		
Section 12 Handbook 1		
Section 14 Handbook 1 and Section 36 Handbook 2	PI 9	
Section 15 Handbook 1	PI 12	
Section 41 Handbook 2		
Section 43 Handbook 2		
Section 44 Handbook 2		
Section 16 Handbook 1		
Section 17 Handbook 1		
	Knowledge base Section 10 Handbook 1 Section 11 Handbook 1 Section 12 Handbook 1 Section 14 Handbook 1 and Section 36 Handbook 2 Section 15 Handbook 1 Section 41 Handbook 2 Section 43 Handbook 2 Section 44 Handbook 2 Section 16 Handbook 1	



Component 5: DANGEROUS BACTERIAL INFECTIONS REQUIRING EMERGENCY TREATMENT		
INFECTION	Knowledge base	Videos
Botulism.	Section 18 Handbook 1	
Buruli ulcer	Section 31 Handbook 2	
Diphtheria.	Section 19 Handbook 1	PI 6
Leprosy	Section 39 Handbook 2	
Leprosy	Section 39 Handbook 2	
Leptospirosis.	Section 20 Handbook 1	
Lyme disease	Section 40 Handbook 2	
Meningococcal Disease.	Section 21 Handbook 1	
Pertussis.	Section 22 Handbook 1	PI 14
Relapsing Fevers.	Section 23 Handbook 1	
Rickettsial Diseases.	Section 24 Handbook 1	
Streptococcal Disease.	Section 25 Handbook 1	
Tetanus.	Section 26 Handbook 1	N73, N74, N75, PI 25
Tuberculosis	Section 27 Handbook 1 and	
	Section 51 Handbook 2	
Typhoid or Paratyphoid.	Section 28 Handbook 1	
Yaws	Section 53 Handbook 2	
Other bacterial Infections.	Section 29 Handbook 1	
Anthrax.		
Brucellosis.		
Campylobacter.		
Chlamydia.		
Haemophilus influenzae.		
Plague.		
Shigellosis.		
Staphylococcal infections.		



Component 6: DANGEROUS PROTOZOAL INFECTIONS REQUIRING EMERGENCY TREATMENT		
INFECTION	Knowledge base	Videos
African Trypanosomiasis.	Section 30 Handbook 1	
Amoebiasis	Sections 60 and 61 Handbook 1	
Cryptosporidiosis	Sections 60,62 and 64 Handbook 1 Section 36 Handbook 2	
Giardiasis	Sections 56,60 and 61 Handbook 1	
	Sections 29 and 36 Handbook 2	
Leishmaniasis	Section 38 Handbook 2	
Malaria.	Section 31 Handbook 1	PI 3, PI 13, PI 20

Component 7: HELMINTHIC INFECTIONS		
INFECTION	Knowledge base	Videos
Dracunculiasis	Section 33 Handbook 2	
Fascicoliasis	Section 34 Handbook 2	
Filiariasis	Section 35 Handbook 2	
Hydatid disease	Section 37 Handbook 2	
Onchocerciasis	Section 42 Handbook 2	
Schistosomiasis	Section 45 Handbook 2	
Strongyloidiasis	Section 48 Handbook 2	



Component 7: HELMINTHIC INFECTIONS		
Taeniasis/cysticercosis	Section 32 Handbook 2	
Worms	Section 52 Handbook 2	

Component 8: SEXUALLY TRANSMITTED INFECTIONS (STIs)		
INFECTION	Knowledge base	Videos
Diagnosis	Section 47 Handbook 2	
Alerting to the possibility of sexual abuse		
Genital ulcers and lymphadenitis;		
Genital herpes;		
Chancre of Primary Syphilis		
Chancroid;		
Lymphogranuloma venereum;		
Granuloma inguinale;		
Urethritis and Vulvo-vaginitis;		
Pelvic inflammatory disease (PID) and epididymitis;		
Acute balanoposthitis;		
Genital Warts;		
Syphilis	Section 49 Handbook 2	

Component 9: STRUCTURED APPROACH TO MANAGING TRAUMA EMERGENCIES IN CHILDREN AND IN ADOLESCENT GIRLS WHO ARE PREGNANT		
SKILL	Knowledge base	Videos



Component 9: STRUCTURED APPROACH TO MANAGING TRAUMA EMERGENCIES IN CHILDREN AND IN ADOLESCENT GIRLS WHO ARE PREGNANT		
Triage	Section 1 Handbook 1	
Blood transfusion	Section 79 HANDBOOK 1	T7, T8, T9
	Section 54 Handbook 2	
Structured approach	Section 77 Handbook 1	
Primary Survey and Resuscitation CABCDE		
Secondary Survey and Emergency Treatments		
Definitive Care		
Wounds and their management		
Tetanus prevention		
Antibiotics		
Specific injuries		
Abrasions		
Lacerations and incisions		
Stab wounds		
Needlestick injuries		
Complications of wounds		
Special issues regarding major trauma in children	Section 79 HANDBOOK 1	
Paediatric 'normal' values		
Shock in the Paediatric Patient		
Special Issues regarding Major Trauma in the child who is pregnant.		
Anatomical and Physiological Changes in Pregnancy and the Management of Trauma		



Component 9: STRUCTURED APPROACH TO ADOLESCENT GIRLS WHO ARE PREGNANT	MANAGING TRAUMA EMERGEN	ICIES IN CHILDREN AND IN
What are the Priorities?		
Action plan		
Indications for Caesarean section		
Resuscitative Hysterotomy (Perimortem Caesarean Section)		
Secondary Assessment in pregnancy		
Blunt trauma		
Penetrating abdominal wounds		
Thoracic trauma		
Management of major trauma		
Primary assessment and resuscitation		
Management of the airway		
Open and maintain the airway		
Needle Cricothyroidotomy		AC17
Surgical Cricothyroidotomy		A37
Management of Breathing		
Assessment		
Needle Thoracocentesis		
Ventilation		
ATOMFC: Airway obstruction, Tension		
pneumothorax, Open pneumothorax, Flail chest, Cardiac tamponade		
Management of the circulation		C1, C2, C3, C4, C6, C7,
Assessment of blood loss		C8, C9,
Resuscitation of circulation		



Component 9: STRUCTURED APPROACH TO MANAGING TRAUMA EMERGENCIES IN CHILDREN AND IN ADOLESCENT GIRLS WHO ARE PREGNANT		
Stop bleeding		
Tranexamic acid		
IV Fluid Resuscitation		
Management of shock due to massive haemorrhage		
Vascular access		
Management of neurological failure		
Assessment AVPU		
Cervical spine protection		
Analgesia in Major Trauma		
Secondary Assessment and Emergency		
Treatment		
Head injury		Т1,
Chest Trauma		AC 8, AC 11, AC 19, PR 18, T5,
Abdominal Trauma		
FAST scanning		
Pelvic trauma		
Limb trauma		
Trauma radiology	Section 59 Handbook 2	
Spinal trauma	Section 58 Handbook 2	
Continuing care for children who have suffered major trauma	Section 80 Handbook 1	
Head Injuries in Children	Section 81 Handbook 1	
Electrical Injuries	Section 82 Handbook 1	



Component 9: STRUCTURED APPROACH TO MANAGING TRAUMA EMERGENCIES IN CHILDREN AND IN ADOLESCENT GIRLS WHO ARE PREGNANT		
Near drowning	Section 83 Handbook 1	
Heat stroke	Section 84 Handbook 1	
Hypothermia	Section 85 Handbook 1	
Burns in children including those who are pregnant	Section 86 Handbook 1	T 10
First aid		
Emergency pain control		
Hospital Admission		Т4
Dressings		
Tetanus		
Antibiotics		
Primary Assessment and Resuscitation		
Assessment of TBSA.		
Inhalational Injury		
Surgery		
Prevention		
Features of burns suggesting child abuse		
Burns in Pregnancy	See Obstetric Handbook Section D2	
Fractures in children	Section 78 Handbook 1	
	Section 55 Handbook 2	

Component 10: POISONING		
SKILL	Knowledge base	Videos from E Library



Component 10: POISONING		
Mortality	Section 87 Handbook 1	
Symptoms and clinical signs of poisoning	_	
Management	_	
First Aid	_	
Primary Assessment and Resuscitation		
Secondary Assessment and Emergency Treatment		
Hypoglycaemia:	_	
Convulsions:	_	
Opiate or methadone overdose:	_	
Minimising the effects of the ingested substance		
Child Abuse	_	
Commonly Ingested Drugs and chemicals		
Poisonous Plants		
Carbon Monoxide Poisoning		
Volatile Substance Abuse ('sniffing')	-	

Component 11: ENVENOMATION		
SKILL	Knowledge base	Videos from E Library
Prevention	Section 88 Handbook 1	



Component 11: ENVENOMATION	
Snakebite	
First Aid Outside Hospital	
Diagnosis and Initial Assessment	
Hospital or Health Centre Management	
Antivenom	
Scorpion Stings	
Spider bites	
Marine Envenoming	

Component 12: ACUTE UPPER AIRWAY OBSTRUCTION DUE TO STRUCTURAL ABNORMALITY AND INFECTIONS			
SKILL	Knowledge base	Videos from E Library	
Croup (includes measles and herpes) bacterial tracheitis, acute epiglottitis, glandular fever	Sections 32 and 33 Handbook 1	AC 6, AC 12, AC 36, AC 41 PR 6, PR 7,	
Choking		AC5	
Angioneurotic oedema: anaphylaxis			
Airway burns			
Retropharyngeal abscess			
Mediastinal tumours			
Inhaled foreign body		AC 10, PR 11, PR 13	
Obstructive sleep apnoea			

Component 13: BRONCHIOLITIS, ASTHMA, ANAPHYLAXIS



SKILL	Knowledge base	Videos from E Library
Bronchiolitis, diagnosis and management	Section 34 Handbook 1	PI 2, PR 1
Asthma; diagnosis and management	Section 35 Handbook 1	PR 12,
Asthma; management of an acute episode		
Asthma; management of severe and life- threatening asthma		PI 18, PR 19
Anaphylaxis	Section 36 Handbook 1	

Component 14: ACUTE RESPIRATORY INFECTION		
SKILL	Knowledge base	Videos from E Library
Acute Upper Respiratory Infection	Section 37 Handbook 1	
Coryza or pharyngitis		
Tonsillitis and peri-tonsillar abscess (quinsy)		
Indications for tonsillectomy		
Acute suppurative otitis media (ASOM), chronic otitis media, secretory otitis media, mastoiditis		
Pneumonia; Acute Lower Respiratory Infection (ALRI)	Section 38 Handbook 1	PI 16, PR 4, PR 5, PR 8, PR 9, PR 14, PR 15, PR 16, PR 17,
Clinical features		10,1117,
Chest X-Ray		
Severe pneumonia, Pneumonia that is not severe, No Pneumonia		
Management		
Oxygen		
Antibiotics		



HIV infection		
Staphylococcal pneumonia		PI 15
ALRI under 6 months of age		
Pleural effusion, empyema, and bronchiectasis	Section 39 Handbook 1	PI 24

Component 15: CARDIAC PROBLEMS		
SKILL	Knowledge base	Videos from E Library
Congenital heart disorders	Section 40 Handbook 1	
Is there a cardiac problem?		
Cyanotic defects with low pulmonary blood flow Tetralogy of Fallot: hypercyanotic episodes		
Cyanotic congenital heart disease with duct-dependent pulmonary blood flow		
Heart murmurs in the apparently well infant and older child		
Cardiac defects in infants and children that may initially present without symptoms are characterised as follows:		
Coarctation of the aorta, aortic stenosis, pulmonary stenosis, atrial septal defect (ASD) and partial atrioventricular septal defect (AVSD)		
ECG findings		
Rheumatic heart disorders	Section 41 Handbook 1	
Acute rheumatic fever		



Component 15: CARDIAC PROBLEMS		
Mitral valve regurgitation		
Mitral valve stenosis		
Aortic regurgitation		
Heart failure and cardiomyopathy	Section 42 Handbook 1	C5
Heart failure in infancy presenting after the first few weeks of life		
Heart failure in later infancy and childhood		
Management of heart failure		
Cardiomyopathy and myocarditis		
Anomalous origin of the left coronary artery from the pulmonary artery (ALCAPA)		
Bacterial endocarditis	Section 43 Handbook 1	
Cardiac arrythmias	Section 44 Handbook 1	
Supraventricular tachycardia		
Ventricular tachycardia		
Shock includes severe bleeding, dehydration, malnutrition, anaemia, sepsis (including Toxic Shock Syndrome) and anaphylaxis.	Section 45 Handbook 1	C1, C2, C3, C4, C6, C7, C8, C9,
Clinical diagnosis of shock		
Basic management of shock		
Shock due to bleeding (internal or external)		
Hypovolaemic shock due to severe dehydration. Shock in children with severe malnutrition		PI 19
Shock in children with severe anaemia		



Component 15: CARDIAC PROBLEMS	
Septic shock Toxic shock syndrome (TSS)	
Shock from anaphylaxis	

SKILL	Knowledge base	Videos from E Library
Medical renal disorders	Section 46 Handbook 1	
Common renal investigations: plasma or serum biochemistry Electrolytes		
Dehydration and hypovolaemia		
Fluid and electrolyte disorders		
Urinary tract imaging techniques		
Urinary tract infections (UTIs)		
Hypertension		
Glomerular disease Nephrotic syndrome Acute and chronic glomerulonephritis Asymptomatic proteinuria or haematuria Haemolytic uraemic syndrome (HUS)		
Urinary tract stones		
Acute renal failure	Section 47 Handbook 1	
Pre-renal ARF		
Established renal failure		
Post-renal failure		
The need for dialysis		



Acute peritoneal dialysis		
Chronic renal failure.	Section 16 Handbook 2	

Component 17: LIVER DISORDERS		
SKILL	Knowledge base	Videos from E Library
Acute Liver Failure	Section 48 Handbook 1	PI 10
Causes		
Degrees of acute liver failure		
Management		
Chronic liver disease	Section 49 Handbook 1	
Symptoms and signs		
Cholestatic CLD and its management		
Portal hypertension (PHT) Diagnosis and		
management Treatment of bleeding varices		
Chronic viral hepatitis B, C and D		
Drug induced liver disease		
The management of nutrition in CLD		

Component 18: ENDOCRINE DISORDERS		
SKILL	Knowledge base	Videos from E Library
Diabetes and Diabetic KetoAcidosis (DKA)	Section 50 Handbook 1	PI 5, PR 2, PR 3,
Diabetes: Type 1 and Type 2		
Diabetic ketoacidosis: Management		



Component 18: ENDOCRINE DISORDERS		
Insulin		
Outpatient care		
Hypoglycaemia	Section 51 Handbook 1	
Causes and management		
Adrenal crisis	Section 52 Handbook 1	
Thyroid disorders	Section 53 Handbook 1	
Neonatal thyrotoxicosis		
Congenital hypothyroidism		
lodine deficiency		
Acquired hypothyroidism		
Thyrotoxicosis		
Thyroid mass		
Addison's disease (hypoadrenalism)	Section 54 Handbook 1	
Cushing's syndrome (hyper-adrenalism)		
Disorders of sexual development	Section 19 Handbook 2	
Congenital adrenal hyperplasia(CAH)		

Component 19: VITAMIN AND MINERAL D	EFICIENCIES	
SKILL	Knowledge base	Videos from E Library
Vitamin A deficiency	Section 55 Handbook 1	
Vitamin B1 deficiency: beriberi		
Nicotinic acid (niacin) deficiency: pellagra		
Vitamin C deficiency: scurvy		
Vitamin D3 deficiency: rickets		



Component 19: VITAMIN AND MINERAL D	EFICIENCIES	
Vitamin K deficiency		
Folic acid deficiency		
lodine deficiency		
Zinc deficiency		

Component 20: SEVERE MALNUTRITION		
SKILL	Knowledge base	Videos from E Library
Assessing nutrition, growth, and pubertal development of children. Measuring body surface area	Sections 65 and 66 Handbook 2	
Common anthropometric case definitions	SECTION 56 HANDBOOK 1	PI 4, PI 21
Severe Acute Malnutrition (SAM)		
Principles of Treatment SAM		
Criteria for admission to inpatient-based "stabilization-centre" care		
INPATIENT MANAGEMENT - OVERVIEW		
Phases of malnutrition treatment		
Dehydration with severe malnutrition		
Emergency IV treatment of established shock in severe malnutrition		
Electrolyte problems in severe malnutrition		
Infections in severe malnutrition: treatment and prevention		
Septic shock: recognition AND TREATMENT		



Component 20: SEVERE MALNUTRITION
Hypothermia: prevention and treatment
Hypoglycaemia: prevention and
treatment
Congestive heart failure
Measles: prevention and treatment
Micronutrient deficiencies
Treatment of anaemia
Dermatosis of kwashiorkor
Continuing diarrhoea
Other infections common in severely
malnourished children
Malnutrition and HIV
Dietary treatment of severe malnutrition
Failure to gain weight
Emotional and physical stimulation
Children with underlying disability
Management of small & nutritionally at-
risk Infants aged under 6 months and their mothers (MAMI)
Problems with management
3

Component 21: SEVERE ANAEMIA		
SKILL	Knowledge base	Videos from E Library
Definitions	Section 57 Handbook 1	
Main causes		



Component 21: SEVERE ANAEMIA	
Management of iron deficiency anaemia	
Blood transfusion	
Antihelminthic drugs	
Treatment of severely anaemic child who is shocked	

Component 22: SICKLE CELL DISEASE		
SKILL	Knowledge base	Videos from E Library
Sickle cell disease	Section 58 Handbook 1 for summary	
Genetic basis; Prognosis; Pathogenesis;		
Clinical presentations; Newborn	Section 26 Handbook 2 for	
screening programmes;	details	
Management of an acute sickle crisis;		
Specific infections; Osteomyelitis;		
Malaria; Meningitis;		
Gastroenteritis/diarrhoea; Viral		
infection;		
Severe anaemia in sickle-cell disease;		
Acute sequestration events; Treatment;	1	
Aplastic crisis;		
Acute chest syndrome (ACS);		
Neurological complications of sickle-cell disease;		
Splenectomy in sickle-cell disease;	_	
Priapism		
Sleep-related upper airways obstruction;		PI 22
Blood transfusion in sickle cell disease	1	



Hydroxyurea		
Component 23 BLOOD CLOTTING DISORD	ERS	
Factor deficiencies: Haemophilia	SECTION 59 HANDBOOK 1	
Platelet deficiencies: idiopathic	_	
thrombocytopenic purpura (ITP)		
Component 24 HAEMOLYTIC ANAEMIAS		
Course	Section 21 Handbook 2	
Causes	Section 21 Handbook 2	
Spherocytosis. Elliptocytosis.		
Stomatocytosis.		
G6PD deficiency.	_	
Pyruvate kinase deficiency.		
Alpha thalassaemia. Beta thalassaemia trait and Beta thalassaemia major.		
-		
Management, transfusion		
Acquired haemolytic anaemia.		
Component 25: ACUTE DIARRHOEA		
SKILL	Knowledge base	Videos from E Library
Classification	Sections 60,61 and 62	PI 19, PI 26
Drinciples of sees management	Handbook 1	
Principles of case management		
Calculating fluid requirements		
Treatment with low-osmolarity ORS		
Zinc supplementation		
	1	1



Component 25: ACUTE DIARRHOEA	
Estimated degrees of dehydration with symptoms, signs and treatment	
Supportive treatments	
Drug therapy: use of antimicrobial and 'anti- diarrhoeal' drugs	
Bloody diarrhoea	
Severe dehydration with shock	
Post-infectious prolonged or persistent diarrhoea	
Management of persistent diarrhoea	
Dietary treatment of persistent diarrhoea	

Component 26: GASTRO-INTESTINAL DISEASE		
SKILL	Knowledge base	Videos from E Library
Inflammatory bowel disease	Section 63 Handbook 1	
Crohn's and ulcerative colitis and their diagnoses and managements		
Gastrointestinal bleeding; its causes and clinical features and management	Section 64 Handbook 1	
Constipation	Section 17 Handbook 2	
Cystic fibrosis	Section 18 Handbook 2	
Upper gastroenterological disorders.	Section 28 Handbook 2	
Gastro-oesophageal reflux.		
Helicobacter.		
Duodenal ulcer.		



Component 26: GASTRO-INTESTINAL DISEASE		
Malabsorption, including coeliac disease.	Section 29 Handbook 2	
Types of malabsorption. Clinical features. Diagnosis. Common causes.		
Coeliac disease. Diagnosis. Biopsies. Treatment.		

Component 27: Cancer in children		
SKILL	Knowledge base	Videos from E Library
Management in resource-limited countries;	Section 15 Handbook 2	
Specialist cancer centres or units;		
Diagnosis, imaging, biochemical markers, pathology		
Treatment protocols; Chemotherapy; Surgery; Radiotherapy;		
Side effects of chemotherapy; Bone- marrow suppression; Infection; Bleeding; Anaemia; Nausea and vomiting; Mucositis; Alopecia; Fatigue and cachexia; Tumour lysis syndrome; Late effects; Infertility; Secondary malignancy;		
Acute lymphoblastic leukaemia (ALL);		
Acute myeloid leukaemia (AML);		
Non-Hodgkin's lymphoma (NHL) including Burkitt's lymphoma;		
Hodgkin's lymphoma;		
Brain tumours; Medulloblastoma; Cerebellar low-grade astrocytoma; High- grade glioma; Ependymoma; Brainstem		



Component 27: Cancer in children	
glioma; Diffuse (malignant) brainstem	
gliomas; Craniopharyngioma;	
Neuroblastoma;	
Retinoblastoma	
Wilms' tumour (nephroblastoma);	
Liver tumours;	
Soft-tissue sarcomas; Kaposi's sarcoma;	
Bone sarcomas including Ewing's tumour and osteosarcoma;	
Palliative chemotherapy and radiotherapy.	

Component 28: ACUTE RHEUMATOLOGY		
SKILL	Knowledge base	Videos from E Library
Rheumatic fever	Section 41 Handbook 1	
Vasculitis		
Henoch-Schönlein purpura (HSP)		
Kawasaki disease		
Juvenile idiopathic arthritis		
Paediatric systemic lupus erythematous (SLE)		
Juvenile dermatomyositis (JDM)		
Idiopathic inflammatory myopathies		



Component 29 NEUROLOGICAL DISORDERS		
Knowledge base	Videos from E Library	
Section 66 Handbook 1	NV1,	
Section 67 Handbook 1	NV2, NV3, NV4, NV5, NV6	
Section 24 Handbook 2		
Section 25 Handbook 2		
Section 68 Handbook 1		
	Knowledge base Section 66 Handbook 1 Section 67 Handbook 1 Section 24 Handbook 2 Section 25 Handbook 2	



Component 29 NEUROLOGICAL DISORDERS		
Japanese Encephalitis Virus		
Herpes simplex virus		
Varicella zoster virus (VZV)		
Measles		
Rabies		
Mycoplasma		
Cryptococcus		
Epilepsy	Section 69 Handbook 1	
Clinical diagnosis		
Anti-epilepsy drugs		
Most common syndromes of epilepsy		
Social issues		
Febrile seizures		
Convulsive status epilepticus	Section 70 Handbook 1	PI 23
Immediate management		
Drug treatment		
General supportive treatment		
Breath-holding episodes	Section 71 Handbook 1	
Cyanotic breath-holding episodes		
Pallid asystolic spells (reflex anoxic seizures)		
Diagnosis and management		
Migraine	Section 72 Handbook 1	
Classification		
Management of acute migraine		



Component 29 NEUROLOGICAL DISORDERS		
Prophylaxis		
Thunderclap headache		
Neurosurgical disorders	Section 73 Handbook 1	
Raised intracranial pressure management		
Intracranial abscesses		PR 10,
Hydrocephalus		T K 10,
Myelomeningocele		

Component 30: SURGICAL DISORDERS		
SKILL	Knowledge base	Videos from E Library
Indirect inguinal hernia	Section 74 Handbook 1	
Incarcerated hernia		
Hydrocoele		
Undescended testis (cryptorchidism)		
Phimosis		
Hypospadias		
Bladder stones		
Cervical swellings:		
Lymphadenopathy		
Cystic hygroma		
Branchial cysts, sinuses and fistulae		
Thyroglossal cyst		



Component 30: SURGICAL DISORDERS	
Epidermoid cyst	
Haemangiomas	
Obstructive jaundice in infancy	
Empyema thoracis	
Urinary tract infection (UTI) due to surgical causes	
Vesico-ureteric reflux (VUR)	
Umbilical hernia	
Umbilical discharge	
Appendicitis	
Pyloric stenosis	
Intussusception	
Intestinal obstruction	
Hirschsprung's disease	
Perforative peritonitis	

Component 31: ORTHOPAEDIC DISORDERS		
SKILL	Knowledge base	Videos from E Library
Infections	Section 75 Handbook 1	
Pyomyositis		
Osteomyelitis		
Septic arthritis		
Non-infective conditions		
Developmental dysplasia of the hip		



Component 31: ORTHOPAEDIC DISORDERS		
Congenital talipes equinovarus		
Perthes disease (Legg–Calve–Perthes disease)		
Slipped upper femoral epiphysis		
Genu varum and genu valgum		
Scoliosis		

Component 32 FRACTURES IN CHILDREN		
SKILL	Knowledge base	Videos from E Library
Diagnosis	Section 78 Handbook 1 and Section 55 Handbook 2	
Open fractures		
Compartment Syndrome;		
X-rays; Salter-Harris Classification		
Treatment of Fractures; Splinting; Plaster Craft; Traction; External Fixation; Internal Fixation;		
Ongoing fracture care; Rehabilitation;		
Specific Fractures;		
Femoral shaft		
Tibial shaft		
Distal humerus		
Forearm fractures		
Distal radial ('wrist') fractures		



Component 33: EYE PROBLEMS		
SKILL	Knowledge base	Videos from E Library
Eye examination and diagnosis:	Section 20 Handbook 2	
Examining the eyes of young children;		
Presenting symptoms of eye disease;		
Conjunctivitis; Acute bacterial conjunctivitis; Acute viral conjunctivitis; Vernal conjunctivitis;		PI1
Trachoma		
Corneal ulcers; Herpes simplex; Bacterial corneal ulcers; Fungal corneal ulcers;		
Iritis		
Vitamin A deficiency (xerophthalmia);		
The child who cannot see or who cannot see well		
Corneal scarring; Cataract; Congenital glaucoma; Retinal diseases; Retinopathy of prematurity; Retinitis pigmentosa; Vitamin A deficiency; Retinoblastoma; Cortical blindness		
Management		
Squint diagnosis and treatment.	-	
Trachoma	Section 50 Handbook 2	

Component 34: MENTAL HEALTH CONDITIONS IN CHILDREN			
Skill Knowledge base Videos			
Acute psychiatric emergencies Section 22 Handbook 2			



hyperpigmentation disorders.

Suicide and deliberate self-harm		
Depressive Disorders;		
Somatisation disorders;		
Drugs and alcohol: use and abuse		
Schizophrenia;		
Post-traumatic stress disorder		
Panic attacks;		
Autism Spectrum Disorders (ASD) Asperger's syndrome		
Attention deficit hyperactivity disorder (ADHD).		
Eating disorders and the danger of refeeding syndrome	Section 23 Handbook 2	
Component 35: SKIN DISORDERS		
Skill	Knowledge base	Videos
Skin disorders	Section 27 Handbook 2	
Scabies.		
Impetigo.		
Tropical ulcer.		
Superficial fungal infections.		
Tinea capitis.		
Eczema.		
Hypopigmentation and	1	



Component 36 MEDICAL ETHICS AND PROFESSIONAL STANDARDS		
Ethics of healthcare	Section 8 Handbook 2	
Autonomy		
Beneficence		
Non-maleficence		
Justice:		
The ethics of consent	-	
Confidentiality	-	
End-of-life issues	-	
Hospital ethics committees		
Research ethics	-	
The health worker-patient relationship		
The healthcare worker-healthcare worker relationship		
The relationship between the healthcare worker and the system of care		
The relationship of the healthcare worker to society		
Component 37: MEDICAL RECORDS, HISTORY TAKING AND CLINICAL EXAMINATION		
Skill	Knowledge base	Videos
History taking	Section 9 Handbook 2	
Examination		
Patients who are not in need of immediate resuscitation		



Component 37: MEDICAL RECORDS, HISTORY TAKING AND CLINICAL EXAMINATION			