

**HEALTH SERVICE STANDARD (HSS)**  
**MINISTRY OF HEALTH**  
**ROYAL GOVERNMENT OF BHUTAN**  
**2019**

Sl. No	Type of Services	NRH <sup>1</sup>	RRH <sup>2</sup>	Hosp. 1 <sup>3</sup>	Hosp. 2 <sup>4</sup>	Hos p.3 <sup>5</sup>	PHC <sup>6</sup>	THC <sup>7</sup>	Sub post	ORC
<b>1</b>	<b>GENERAL SERVICES</b>									
1.1	Outpatient Services	✓	✓	✓	✓	✓	✓	✓	✓	
1.1.1	Specialized Clinics	✓	✓	✓	✓	✓				
1.1.2	Ambulatory Services	✓	✓							
<b>1.2</b>	<b>Inpatient Services</b>									
1.2.1	General Ward			✓	✓	✓	Observation	Observation	Observation	
1.2.2	Birthing Center	✓	✓	✓	✓	✓	✓		✓	
1.2.3	Private Cabin Services	✓	✓	Selected HF						
1.2.4	Department-wise Wards	✓	✓							
1.2.5	Patient Diet Services	✓	✓	✓	✓	✓				
1.3	Medical Record	✓	✓	✓	✓	✓	✓	✓	✓	✓
1.4	Maintenance and Operational Services	✓	✓							
1.5	Biomedical Engineering Services (for medical equipment)	✓	✓	✓	✓					
1.6	Telemedicine	✓	✓	✓	✓	✓	✓	✓	✓	
1.7	Epidemiology and Disease Surveillance Services	✓	✓	✓	✓	✓	✓	✓	✓	
1.8	Infection Control and Waste Management	✓	✓	✓	✓	✓	✓	✓	✓	✓
1.9	Sterilization Services	✓	✓	✓	✓	✓	✓	✓	✓	
<b>2</b>	<b>ANAESTHESIOLOGY SERVICES</b>									
2.1	Local/regional anesthesia	✓	✓	✓	✓	✓	✓	✓	✓	
2.2	General Anesthesia	✓	✓	Ref <sup>8</sup>						
2.3	Pain Management	✓	✓	✓	✓					

<sup>1</sup> National Referral Hospital (NRH) >350 bedded

<sup>2</sup> Regional Referral Hospital (RRH) 150 bedded

<sup>3</sup> Hospital 1: 40 to 60 bedded

<sup>4</sup> Hospital 2: 20 bedded

<sup>5</sup> Hospital 3: 10 bedded

<sup>6</sup> Primary Health Centre: 5 bedded

<sup>7</sup> Thromde Health Centre: 5 bedded

<sup>8</sup> In identified CEMOC, Trauma and ESS Center

Sl. No	Type of Services	NRH <sup>1</sup>	RRH <sup>2</sup>	Hosp. 1 <sup>3</sup>	Hosp. 2 <sup>4</sup>	Hosp. 3 <sup>5</sup>	PHC <sup>6</sup>	THC <sup>7</sup>	Sub post	ORC
<b>2.4</b>	<b>ICU Services</b>									
2.4.1	Adult ICU	✓	✓							
2.4.2	Pediatric ICU	✓	✓	Ref <sup>9</sup>						
2.4.3	Neonatal ICU	✓	✓							
<b>3</b>	<b>COMMUNITY HEALTH SERVICE<sup>10</sup></b>									
<b>3.1</b>	<b>Reproductive Health</b>									
3.1.1	Ante natal care (ANC)	✓	✓	✓	✓	✓	✓	✓	✓	✓
3.1.2	Post-natal care (PNC)	✓	✓	✓	✓	✓	✓	✓	✓	✓
3.1.3	Family Planning services	✓	✓	✓	✓	✓	✓	✓	✓	✓
3.1.4	Screening Program (Pap Smear)	✓	✓	✓	✓	✓	✓	✓	✓	✓
3.1.5	Screening Program (VIA and Colposcopy)	✓	✓	Ref <sup>11</sup>						
<b>3.2</b>	<b>Well Baby Clinic</b>									
3.2.1	Immunization and Growth Monitoring	✓	✓	✓	✓	✓	✓	✓	✓	✓
3.2.2	Lactation Management	✓	✓	✓	✓	✓	✓	✓	✓	
3.2.3	Newborn Examination	✓	✓	✓	✓	✓	✓	✓	✓	
3.2.4	Nutrition Rehabilitation Unit	✓	✓	✓	✓					
<b>3.3</b>	<b>Counseling Services</b>									
3.3.1	Voluntary Counseling and Testing	✓	✓	✓	✓	✓	✓	✓	✓	
3.3.2	Health Information Service Center	✓	Gelephu	Pling	S/J/Tro ngsa/Lo besa					
3.3.3	Adolescent Friendly Health Services	✓	✓	✓	✓	✓	✓	✓	✓	
3.4	Health Education	✓	✓	✓	✓	✓	✓	✓	✓	✓
3.5	Community Based Palliative and Geriatric Care	✓	✓	✓	✓	✓	✓	✓	✓	
3.5	School Health Services	✓	✓	✓	✓	✓	✓	✓	✓	
<b>3.6</b>	<b>Support Services</b>									
3.6.1	USG	✓	✓	✓	✓	✓		✓		
3.6.2	Laboratory	✓	✓					✓		

<sup>9</sup> In identified CEmOC, Trauma and ESS Center

<sup>10</sup> Preventive, Promotive, Rehabilitative and Reproductive Health Services

<sup>11</sup> In hospitals where there is gynecologist

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3.6.3	Pharmacy	✓						✓		
<b>4</b>	<b>DENTAL SERVICES</b>									
4.1	General Dental Services	✓	✓	✓	✓	✓				
<b>4.2</b>	<b>Advanced dermatology services</b>									
4.2.1	Oral Surgery	✓	✓							
4.2.2	Prosthodontic Services	✓	✓							
4.2.3	Orthodontic Services	✓	✓							
4.2.4	Pedodontic Services	✓								
4.2.5	Periodontic Services	✓								
4.2.6	Endodontic Services	✓								
<b>5</b>	<b>DERMATOLOGY SERVICES</b>									
5.1	General Dermatology Services	✓	✓	✓	✓	✓	✓	✓	✓	
5.1.1	Specialized Dermatology Services	✓	✓							
<b>5.2</b>	<b>Advanced dermatology services</b>									
5.2.1	Photobiology Services	✓								
5.2.2	Pediatric Dermatological Services	✓								
5.2.3	Contact and Occupational Clinic	✓								
5.2.4	Allergy Clinic	✓								
<b>6</b>	<b>EMERGENCY SERVICES</b>									
6.1	Pre-hospital services	✓	✓	✓	✓	✓				
6.2	Basic Emergency Services (BLS Certified)	✓	✓	✓	✓	✓	✓	✓	✓	
6.3	Advanced Emergency Services (casualty) ALS Certified	✓	✓	✓	✓	✓		✓		
6.4	Mass casualty and disaster response service	✓	✓	✓	✓	✓	✓	✓		
6.5	Triage Services	✓	✓	✓	✓					
6.6	Ambulance Services	✓	✓	✓	✓	✓	Selected BHU-IIs & Paro Air Port			
6.7	Health Emergency Operating Center	✓	✓	✓	✓	✓				
6.8	Emergency Department/Unit	✓	✓	✓						
<b>7</b>	<b>ENT SERVICES</b>									
7.1	Special ENT services	✓	✓							

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7.2	ENT services by Technician	✓	✓	✓	✓	✓				
7.3	Basic ENT Services			✓	✓	✓	✓	✓	✓	
<b>7.4</b>	<b>Advanced ENT services</b>									
7.4.1	Audiology and speech therapy	✓	✓							
7.4.2	Otology Services	✓	✓							
7.4.3	Rhinology Services	✓	✓							
7.4.4	Head and Neck Services	✓	✓							
7.4.5	Laryngology Services	✓	✓							
7.4.6	Broncho-esophagology Services	✓	✓							
7.4.7	Reconstructive Facial Plastics Services	✓								
7.4.8	ENT Oncology	✓								
<b>8</b>	<b>FORENSIC SERVICES</b>									
8.1	Basic Forensic Services	✓	✓	✓	✓	✓	✓	✓	✓	
8.2	Advanced Forensic Services	✓	✓							
8.3	Clinical Forensics	✓	✓							
8.4	Forensic Pathology	✓	✓							
8.5	Forensic Toxicology	✓	✓							
8.6	Forensic Laboratory Services	✓	✓							
<b>9</b>	<b>GYNECOLOGY AND OBSTETRIC SERVICES</b>									
9.1	Basic Emergency Obstetric Care (EmOC) and Delivery Services (Normal)	✓	✓	✓	✓	✓	✓	✓	✓	
9.2	Delivery Services (Assisted)	✓	✓	✓	✓	✓				
9.3	Caesarean Section	✓	✓	Ref <sup>12</sup>						
9.4	General Gynae Surgery (Major and Minor)	✓	✓							
9.5	Maternal Fetal Medicines	✓	✓							
9.6	Gynae-oncology	✓	✓							
9.7	Laparoscopy	✓	✓							
9.8	Hysteroscopy	✓	✓							

<sup>12</sup> CEmOC centers only

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9.9	Uro-Gynaecology	✓	✓							
9.10	Infertility and Reproductive Medicine	✓								
9.11	Mammography	✓	✓							
<b>10</b>	<b>LABORATORY SERVICES</b>									
10.1	Stool Routine Examination (RE)	✓	✓	✓	✓	✓	✓	✓	✓	
10.2	Urine Routine Examination (RE)	✓	✓	✓	✓	✓	✓	✓	✓	
10.3	Pregnancy (rapid)	✓	✓	✓	✓	✓	✓	✓	✓	
10.4	Blood Hemoglobin (Hb)	✓	✓	✓	✓	✓	✓	✓	✓	
10.5	Microbiology	Ref <sup>13</sup>								
10.6	Biochemistry									
10.7	Hematology									
10.8	Histo-Pathology and Cytology									
<b>11</b>	<b>MEDICINE SERVICES</b>									
11.1	Palliative Care Medicine	✓	✓							
11.2	Geriatric Medicine	✓	✓							
11.3	Chest Medicine	✓	✓	Gidakom only						
11.4	Infectious disease medicine	✓	✓							
11.5	Cardiology services	✓	✓							
11.6	Electrocardiogram	✓	✓	✓	✓					
11.7	Echocardiography	✓	✓							
11.8	Renal transplantation Services	✓								
11.9	Hemodialysis	✓	✓							
11.10	Peritoneal dialysis	✓	✓							
11.11	Gastroenterology	✓	✓							
11.12	Endoscopy (Upper and Lower GI)	✓	✓							
11.13	Neurology Services	✓								
11.14	Endocrinology	✓								

<sup>13</sup> Refer Clinical Laboratory Services & Public Health Laboratory Services

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11.15	NCDs Clinic	✓	✓	✓	✓	✓		✓		
11.16	Rheumatology Services	✓	✓							
11.17	Haemato-oncology services	✓								
<b>12</b>	<b>OPHTHALMOLOGY SERVICES</b>									
12.1	Primary Eye Care	✓	✓	✓	✓	✓	✓	✓	✓	
12.2	General Ophthalmology Services	✓	✓	✓	✓	✓				
12.3	Specialized Ophthalmology Services	✓	✓							
12.4	<b>Advanced Ophthalmology Services</b>									
12.4.1	Pediatric Ophthalmology	✓								
12.4.2	Cornea and anterior segment	✓								
12.4.3	Cornea transplant	✓								
12.4.4	Oculoplasty	✓								
12.4.5	Vitreoretinal	✓								
12.4.6	Glaucoma	✓								
<b>13</b>	<b>ORTHOPEDIC SERVICES</b>									
13.1	Emergency Orthopedic Care/ <sup>14</sup>	✓	✓	✓	✓	✓	✓	✓	✓	
13.2	Primary Orthopedic Care <sup>15</sup>	✓	✓	✓	✓	✓		✓		
13.3	General Orthopedic Services <sup>16</sup>	✓	✓	Ref <sup>17</sup>						
13.4	Advanced / Specialized Operative and Non-operative Orthopedic Services	✓								
13.4.1	Pediatric Orthopedic Surgeries	✓								
13.4.2	Joint reconstructive surgery	✓								
13.4.3	Hand and micro-surgery	✓								
13.4.4	Complex trauma surgery	✓	✓							
13.4.5	Spine surgery	✓	✓							
13.4.6	Sports Medicine and Arthroscopic surgery	✓	✓							

<sup>14</sup> First Aid such as immobilization of fractures & dislocations, soft tissue injuries.

<sup>15</sup> Non-operative management of Orthopedic cases such as closed reduction of simple fractures and dislocations, screening and follow up of Orthopedic cases.

<sup>16</sup> Operative and Non- Operative General Orthopedic Services for MSK Injuries and Disorders

<sup>17</sup> In selected Trauma Centers only

Sl. No	Type of Services	NRH <sub>1</sub>	RRH <sub>2</sub>	Hosp. <sub>13</sub>	Hosp. <sub>24</sub>	Hosp. <sub>p.35</sub>	PHC <sub>6</sub>	THC <sub>7</sub>	Sub post	ORC
13.4.7	<i>Orthopedic Onco-surgery for Musculoskeletal injuries and disorders</i>	✓								
<b>14</b>	<b>PAEDIATRIC SERVICES</b>									
14.1	Treatment of minor ailments and under 5 growth monitoring/IMNCI	✓	✓	✓	✓	✓	✓	✓	✓	
14.2	Neonatal care and management of new born	✓	✓	✓	✓	✓	✓	✓	✓	
14.4	Neonatology Services	✓	✓	Ref <sup>18</sup>						
14.5	Pediatric Medicine	✓	✓	Ref <sup>19</sup>						
14.6	Pediatric Nephro Services	✓								
14.7	Pediatric Surgery	✓	✓							
<b>15</b>	<b>PHARMACY SERVICES</b>									
15.1	Medicine Dispensing/Injection	✓	✓	✓	✓	✓	✓	✓	✓	✓
15.2	Pharmacovigilance	✓	✓	✓	✓					
15.3	Drug Information Services	✓	✓	✓	✓					
15.4	Extemporaneous Compounding	✓	✓	✓	✓	✓	✓	✓	✓	
15.5	Anti-retroviral therapy Pharmaceutical Care	✓	✓	✓	✓					
15.6	In-patient Pharmacy	✓	✓							
15.7	Radio Pharmaceutical	✓	✓							
<b>16</b>	<b>PHYSIOTHERAPY SERVICES</b>									
16.1	Basic Physiotherapy Services	✓	✓	✓	✓	✓	✓	✓	✓	
16.2	Sports Physiotherapy Services	✓								
16.3	Cardiopulmonary Physiotherapy Services	✓								
16.4	Emergency and Acute Care Physiotherapy Services	✓	✓							
16.5	Women's' Health Physiotherapy Services	✓								
16.6	Neurologic Physiotherapy Services	✓								
16.7	Pediatric Physiotherapy Services	✓	✓							

<sup>18</sup> CEmOC Centers only

<sup>19</sup> CEmOC Centers only

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16.8	Geriatric Physiotherapy Services	✓	✓	✓	✓	✓	✓	✓	✓	
16.9	Burns/ wounds and Plastic Services	✓	✓							
16.10	Occupational and Ergonomic Services	✓	✓	Gidakom						
16.11	Hand Therapy Services	✓	✓							
16.12	Trigger point Dry needling/ acupuncture Services	✓								
16.13	Prosthetic and Orthotic Services	✓	✓	Gidakom						
16.14	Electro Therapy Services	✓	✓	✓	✓					
16.15	Community Based Rehabilitation Services	✓	✓	✓	✓	✓	✓	✓	✓	
16.16	Pain and Palliative Physiotherapy Services	✓	✓	✓	✓					
<b>17</b>	<b>PSYCHIATRY SERVICES</b>									
17.1	Management of Common Mental Disorders	✓	✓	✓	✓	✓	✓	✓	✓	
17.2	Community Mental Health Services	✓	✓	✓	✓	✓	✓	✓	✓	
17.3	Detoxification and Rehabilitative Services	✓	✓	✓	✓	✓	✓	✓	✓	
17.4	Psychotherapy services	✓	✓							
17.5	Counseling services	✓	✓	✓	✓	✓				
<b>17.6</b>	<b>Specialized Psychiatric Services</b>									
17.6.1	Child and Adolescent Psychiatric Services	✓	✓							
17.6.2	Adult and Geriatric Psychiatric Services	✓	✓							
17.6.3	Addiction Psychiatric Services	✓	✓	*For Gidakom						
17.6.4	Electroconvulsive therapy (ECT)	✓	✓							
<b>18</b>	<b>RADIOLOGY SERVICES</b>									
18.1	X-Ray Services	✓	✓	✓	✓	✓		✓		
18.2	Ultrasound Services	✓	✓	✓	✓	✓		✓		
18.3	Advanced Sonography Services	✓	✓	✓						
18.4	Contrast X-Ray Services	✓	✓							
18.5	CT Plain and Contrast	✓	✓							
18.6	MRI Plain and Contrast	✓								

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18.7	Interventional Radiography	✓								
18.8	Mammography	✓	✓							
<b>19</b>	<b>SURGICAL SERVICES</b>									
19.1	Minor Surgical Services	✓	✓	✓	✓	✓	✓	✓	✓	
19.2	General Surgery	✓	✓	Ref <sup>20</sup>						
19.3	Neuro-surgery	✓	✓							
19.4	Onco-surgery	✓	✓							
19.5	General Uro-surgery	✓	✓							
19.6	Endo Uro-surgery	✓								
19.7	Pediatric surgery	✓	✓	Ref <sup>21</sup>						
19.8	Laparoscopy Surgery	✓	✓							
<b>20</b>	<b>ONCOLOGY SERVICES</b>									
20.1	Radiation Therapy	✓								
20.2	Clinical Oncology	✓								
<b>21</b>	<b>BLOOD TRANSFUSION</b>									
21.1	Blood Transfusion Service	✓	✓	✓	✓	✓				
21.2	Blood Bank Service	✓	✓	Ref <sup>22</sup>						
<b>22</b>	<b>LAUNDRY SERVICE</b>									
<b>23</b>	<b>STERILIZATION SERVICE</b>									
23		✓	✓	✓	✓	✓	✓	✓	✓	
<b>24</b>	<b>ADMINISTRATION &amp; SUPPORT SERVICE</b>									
24		✓	✓	✓	✓	✓		✓		

<sup>20</sup> In identified CEmO Center only

<sup>21</sup> In identified CEmO Center only

<sup>22</sup> Identified Blood centers

## Service Standard Clinical Laboratory Services

Sl. No	Type of Services	NRH <sup>23</sup>	RRH <sup>24</sup>	Hosp. 1 <sup>25</sup>	Hosp. 2 <sup>26</sup>	Hosp. 3 <sup>27</sup>	THC <sup>28</sup>	PHC + SP <sup>29</sup>
<b>1</b>	<b>BASIC &amp; ROUTINE TESTS</b>							
1.1	Stool Occult Blood Test (OBT)	✓	✓	✓	✓	✓	✓	✓
1.2	Urine Routine Examination (RE)- sugar & albumin	✓	✓	✓	✓	✓	✓	✓
1.3	Pregnancy test (rapid)	✓	✓	✓	✓	✓	✓	✓
1.4	Blood Haemoglobin (Hb)	✓	✓	✓	✓	✓	✓	✓
1.5	Urine Routine Examination (RE)	✓	✓	✓	✓	✓	✓	
1.6	Blood ABO grouping & Rh typing	✓	✓	✓	✓	✓	✓	✓
<b>2</b>	<b>BIOCHEMISTRY</b>							
2.1	Blood sugar, OGTT, Urea, Creatinine, Uric acid, ALT, AST, ALP, Bilirubin (total, direct and indirect), albumin, Protein (total and albumin), Cholesterol (total, HDL, LDL), triglyceride, electrolytes, Calcium, Magnesium, Phosphorous, LDH, Gamma-GT, CPK, CRP, ASO, CK-MB	✓	✓	✓	✓			
2.2	Blood sugar, Urea, Creatinine, ALT, AST, ALP, Bilirubin (total, direct and indirect), Cholesterol (total, HDL, LDL), triglyceride, electrolytes	✓	✓	✓	✓	✓	✓	
2.3	Blood Sugar by glucometer	✓	✓	✓	✓	✓	✓	✓
2.4	HbA1C	✓	✓					
2.5	HbA1C (rapid)	✓	✓	✓	✓			
2.6	Lithium	✓	✓					
2.7	Drug Level Monitoring	✓						
2.7	Troponin and CK-MB	✓	✓					
2.8	BNP	✓						
2.9	RF (quantitative)	✓	✓	✓	✓			
2.10	Amylase, Lipase	✓	✓					
2.11	Lactate	✓	✓					
2.12	ANA, dsDNA	✓	✓					
2.13	Anti-phospho lipid	✓						
2.14	CSF and sterile fluid – glucose, protein, LDH	✓	✓					
2.15	Capillary bilirubin	✓	✓	✓	✓			

<sup>23</sup> National Referral Hospital (NRH) >350 bedded

<sup>24</sup> Regional Referral Hospital (RRH) 150 bedded

<sup>25</sup> Hospital 1: 40 to 60 bedded

<sup>26</sup> Hospital 2: 20 bedded

<sup>27</sup> Hospital 3: 10 bedded

<sup>28</sup> Thromde Health Centre: 5 bedded

<sup>29</sup> Primary Health Centre & Sub-post

Sl. No	Type of Services	NRH <sub>23</sub>	RRH <sup>24</sup>	Hosp. 1 <sup>25</sup>	Hosp. 2 <sup>26</sup>	Hos p.3 <sup>27</sup>	THC <sup>28</sup>	PHC + SP <sup>29</sup>
2.16	PPD/Mantoux	✓	✓	✓	✓			
2.17	D-dimer	✓						
2.18	Vitamin B1, B6, B12, Vit D level	✓						
2.19	Rapid Urease Test for H. Pylori	✓	✓					
<b>2.20</b>	<b>Hormonal Assays</b>							
2.20.1	TSH (total, T3, T4)	✓	✓					
2.20.2	LH, FSH, Prolactin, Progesterone, Beta-hCG	✓	✓					
2.20.3	Estradiol, Testosterone, Cortisol	✓						
2.20.4	ACTH, Growth Hormone	✓						
2.20.5	Intact parathyroid hormone level	✓						
<b>2.21</b>	<b>Tumor Markers</b>							
2.21.1	AFP, CEA	✓						
2.21.2	CA 19-9, CA 153, CA 125	✓						
2.21.3	PSA (total and free)	✓						
<b>2.22</b>	<b>Urine Special Tests</b>							
2.22.1	Urine Electrolytes	✓						
2.22.2	Urine osmolality	✓						
2.22.3	Urine Copper	✓						
2.22.4	Urine VMA	✓						
<b>3</b>	<b>HAEMATOLOGY</b>							
3.1	CBC, ESR	✓	✓	✓	✓	✓	✓	
3.2	Prothrombin time, INR	✓	✓	✓	✓			
3.3	Reticulocyte count	✓	✓					
3.4	Serum Ferritin	✓	✓					
3.5	Serum Iron	✓						
3.6	TIBC	✓						
<b>3.7</b>	<b>Serum Transferin level</b>							
3.7.1	BT/CT	✓	✓	✓	✓			
3.7.2	APTT	✓						
3.7.3	Bone marrow smear and biopsy	✓	✓					
3.7.4	Body fluid – Cytology, Biochemistry, TLC, DC, ADA	✓	✓					
3.7.5	PBS	✓	✓					
3.7.6	Osmotic fragility test	✓	✓					
3.7.7	Flow cytometry, HPLC	✓						
3.7.8	Haemoglobin Electrophoresis	✓						
<b>4</b>	<b>PATHOLOGY AND CYTOLOGY</b>							
4.1	H & E staining	✓	✓					
4.2	Immuno-histo Chemistry	✓	✓					
4.3	Frozen section	✓	✓					
4.4	Special stains	✓	✓					

Sl. No	Type of Services	NRH <sub>23</sub>	RRH <sup>24</sup>	Hosp. 1 <sup>25</sup>	Hosp. 2 <sup>26</sup>	Hos p.3 <sup>27</sup>	THC <sup>28</sup>	PHC + SP <sup>29</sup>
4.5	FNAC	✓	✓					
4.6	Pap Smear	✓	✓	Selected hospitals				
4.7	Immuno-fluorescence	✓						
<b>5</b>	<b>MICROBIOLOGY</b>							
5.1	Culture and ABST of all microbiological samples for general bacteriology	✓	✓	Selected hospitals				
5.2	India ink stain for cryptococcus	✓	✓	✓				
5.3	Sputum AFB	✓	✓	✓	✓	✓	✓	
5.4	Urine AFB	✓	✓	✓	✓	✓	✓	
5.5	HVS (High Vaginal Swab) for TV, Candida	✓	✓	✓	✓			
5.6	Urethral and Intra-cervical smear for microscopy (for GC)	✓	✓	✓	✓			
5.7	Fungal scraping for microscopy	✓	✓	✓	✓	✓	✓	
5.8	HIV, HCV, HBV serology (Rapid)	✓	✓	✓	✓	✓	✓	
5.9	HIV, HCV, HBV serology (ELISA)	✓	✓	Selected hospitals				
5.10	HBeAg	✓						
5.11	Anti HBs	✓						
5.12	Anti HBc total	✓						
5.13	Anti Hbe	✓						
5.14	Hepatitis B virus DNA quantitative	✓						
5.15	Anti HVE (E virus)	✓	✓					
5.16	Anti HVA (A virus)	✓	✓					
5.17	Hepatitis C RNA	✓						
5.18	CSF-VDRL	✓						
5.19	Syphilis (RPR, TPHA)	✓	✓	✓	✓	✓	✓	
5.20	CD4 count	✓	✓	Selected hospitals				
5.21	CD8, HIV Viral Load	✓						
5.22	Seminal fluid analysis	✓	✓	✓	✓			
5.23	TORCH screening	✓						
5.24	Rickettsial serology (at the moment only Scrub typhus)	✓	✓	✓	✓			
5.25	Leptospira Serology	✓						
5.26	Japanese Encephelitis Serology (in PHL at present)	✓						
5.27	Kala azar (RK 39)	✓	✓	✓	✓			
5.28	HSV (PCR)	✓						
5.29	Echinococcus	✓	✓					
5.30	Dengue (rapid)	✓	✓	✓	✓	✓	✓	
5.31	Dengue (ELISA)	✓						
5.32	Rapid Urease Test for H. Pylori	✓	✓					
<b>6</b>	<b>BLOOD BANK SERVICES</b>							

Sl. No	Type of Services	NRH <sub>23</sub>	RRH <sup>24</sup>	Hosp. 1 <sup>25</sup>	Hosp. 2 <sup>26</sup>	Hos p.3 <sup>27</sup>	THC <sup>28</sup>	PHC + SP <sup>29</sup>
<b>6.1</b>	<b>Blood Donation Services</b>							
6.1.1	Blood donor screening, Blood donation procedure and post donation care and advice	✓	✓	✓	✓	✓		
6.1.2	Donor ABO grouping(cell & serum )	✓	✓	✓	✓	✓		
6.1.3	Donor Rh “D” typing	✓	✓	✓	✓	✓		
6.1.4	Donor Weak “D” test (if indicated)	✓	✓	✓	✓	✓		
6.1.5	Donor Hemoglobin test	✓	✓	✓	✓	✓		
6.1.6	Donor Rh phenotyping (if indicated)	✓	✓					
6.1.7	Donor Red cell phenotyping for other antigens	✓						
6.1.8	Screening tests of all donated blood units for HIV; Hepatitis B and Hepatitis C viruses; and Syphilis mandatorily. *Blood banks in Malaria endemic districts shall mandatorily screen all units for Malarial antigens. *Rest of the blood banks shall screen for Malarial antigens only if indicated. This is as per the National Standards for BTS document	✓	✓	✓	✓	✓		
<b>6.2</b>	<b>Transfusion Laboratory Services</b>							
6.2.1	Blood transfusion procedure to patients	✓	✓	✓	✓	✓		
6.2.2	ABO grouping of blood recipient (cell & serum)	✓	✓	✓	✓	✓		
6.2.3	Rh “D” typing of blood recipient	✓	✓	✓	✓	✓		
6.2.4	Cross-matching test	✓	✓	✓	✓	✓		
6.2.5	Antibody Screening of blood recipient (IAT)	✓	✓					
6.2.6	Antibody Identification of blood recipient	✓						
6.2.7	Recipient’s Rh phenotyping	✓	✓					
6.2.8	Recipient’s red cell phenotyping for other antigens	✓						
6.2.9	Direct Anti-globulin tests(DAT)	✓	✓	✓	✓	✓		
6.2.10	Auto-control tests	✓	✓	✓	✓	✓		
6.2.11	Tests for Patient Adverse Reaction to Transfusion	✓	✓	✓	✓	✓		
<b>6.3</b>	<b>Quality Assurance Services</b>							
6.3.1	Quality Control tests on blood group serology reagents (anti-sera and red cells)	✓	✓	✓	✓	✓		
6.3.2	Quality Control tests on all TTI screening reagents	✓	✓	✓	✓	✓		

Sl. No	Type of Services	NRH <sup>23</sup>	RRH <sup>24</sup>	Hosp. 1 <sup>25</sup>	Hosp. 2 <sup>26</sup>	Hosp. p.3 <sup>27</sup>	THC <sup>28</sup>	PHC + SP <sup>29</sup>
6.3.3	Quality Control tests on blood component products	✓						
<b>6.4</b>	<b>Tests for resolving ABO discrepancies (donor or recipients)</b>							
6.4.1	Warm technique	✓	✓	✓	✓	✓		
<b>6.5</b>	<b>Blood Component Production Services</b>							
6.5.1	Packed red cell preparation (centrifugal method by automation)	✓	✓					
6.5.2	Fresh Frozen Plasma Preparation (centrifugal method by automation)	✓	✓					
6.5.3	Platelet concentrate Preparation (centrifugal method by automation)	✓	✓					
6.5.4	Cryoprecipate Preparation (centrifugal method by automation)	✓	✓					
6.5.5	Packed cells preparation (Sedimentation method)	✓	✓	✓	✓	✓		
6.5.6	Liquid Plasma preparation	✓	✓	✓	✓			
<b>6.6</b>	<b>Other Tests</b>							
6.6.1	Prenatal tests for ABO, Rh "D" typing and Antibody screening	✓	✓					
6.6.2	Prenatal tests for ABO, and Rh D typing including Weak "D" only	✓	✓	✓	✓	✓		
6.6.3	Prenatal tests for ABO, and Rh D typing		✓	✓	✓	✓		

### Service Standard of Public Health Laboratory Services

Sl. No	Types of Services	PHL <sup>30</sup>	RRH <sup>31</sup>	H1 <sup>32</sup>	H2 <sup>33</sup>	H3+ THC <sup>34</sup>	PHC + SP <sup>35</sup>
<b>1</b>	<b>Drinking water quality monitoring testing</b>						
1.1	Chemical tests	✓					
1.2	Bacteriological and physio- chemical tests	✓	✓	✓	✓	✓	
<b>2</b>	<b>Food Testing</b>						
2.1	Microbiological tests	✓					
2.2	Chemical tests	✓					
2.3	Iodine test in salt (titration method)	✓	✓	✓	✓		
2.4	Iodine test in salt (spot/rapid test)			✓	✓	✓	✓
<b>3</b>	<b>Serological tests</b>						
3.1	Quality assessment (NEQAS),	✓					
3.2	ELISA (Measles, Rubella, JE, HAV, HDV, CHIKV, Leptospirosis, rotavirus, norovirus, other rare and	✓					

<sup>30</sup> Public Health Laboratory

<sup>31</sup> Regional Referral Hospital

<sup>32</sup> Hospital (60 & 40 bedded)

<sup>33</sup> Hospital (20 bedded)

<sup>34</sup> Hospital (10 bedded) & Thromde Health Centre

<sup>35</sup> Primary Health Centre & Sub-Post

Sl. No	Types of Services	PHL <sup>30</sup>	RRH <sup>31</sup>	H1 <sup>32</sup>	H2 <sup>33</sup>	H3+ THC <sup>34</sup>	PHC + SP <sup>35</sup>
	emerging infectious agents)						
3.3	ELISA (dengue, scrub typhus)	✓	✓	✓	✓		
3.4	ELISA (HIV, HBsAg, HCV)	✓	✓	✓	✓		
3.5	Rapid (HBsAg, HCV, RPR, TPHA, dengue, scrub typhus, influenza)	✓	✓	✓	✓		
3.6	Rapid test (HIV)	✓	✓	✓	✓	✓	✓
<b>4</b>	<b>Enteric and Respiratory Diseases</b>						
4.1	Culture and AST	✓	✓	✓	✓		
4.2	Typing of strains	✓					
<b>5</b>	<b>Fungal and Parasitology</b>						
5.1	Culture	✓	✓	✓	✓		
5.2	Typing of strains	✓					
<b>6</b>	<b>Tuberculosis</b>						
6.1	Microscopy	✓	✓	✓	✓	✓	
6.2	Culture	✓	✓				
6.3	DST	✓					
6.4	Screening of MDR by molecular technique	✓	✓	✓	✓		
6.5	Quality assessment (NEQAS),	✓					
<b>7</b>	Virological lab services						
<b>8</b>	Molecular Lab Services						
<b>9</b>	Drug Quality Testing						
<b>10</b>	Narcotic testing						
<b>11</b>	Poison Information						
<b>12</b>	Disease epidemiology and Surveillance						
<b>13</b>	Biosafety and Biosecurity						

## Traditional Medicine Service Standard

S/N	TYPE OF SERVICE	NTM H <sup>36</sup>	RRH <sub>37</sub>	H 1 <sup>38</sup>	H2 <sup>39</sup>	H3 <sup>40</sup>	PHC <sup>41</sup>	THC <sub>42</sub>
1	OPD services	✓	✓	✓	✓	✓	✓	
2	Urine analysis	✓	✓	✓	✓	✓	✓	
3	Chhirkoed Menchoe Services (ORC)	✓	✓	✓	✓	✓	✓	
4	Geriatric care service	✓	✓	✓	✓	✓	✓	
5	Traditional Medicine Community Health Services	✓	✓	✓	✓	✓	✓	
6	Zhe Ney Services	✓	✓	✓	Selected hospitals			
7	In-patient services	✓						
8	Administrative and support services	✓	✓					
<b>9</b>	<b>Jamched (Non-invasive)</b>							
9.1	Langdug (Local steam application)	✓	✓	✓	✓	✓	✓	
9.2	Chhulum (Herbal bath)	✓	✓					
9.3	Langlum (Steam bath)	✓	✓					
9.4	Chinglum (Herbal pack compression)	✓	✓	✓				
9.5	Jugpa (Massage)	✓						
<b>10</b>	<b>Tsubched (Invasive)</b>							
10.1	Serkhab (Gold needle)	✓	✓	✓	✓	✓	✓	
10.2	Ngulxhab (Silver needle)	✓	✓	✓	✓	✓	✓	
10.3	Tarr (Venesection)	✓	✓	✓	✓	✓		
10.4	Meytsa (Direct moxibustion)	✓	✓	✓	✓	✓		
10.5	Galen meytsa (Indirect moxibustion)	✓	✓	✓	✓	✓		
10.6	Tradhen Serkhab (Gold needle moxibustion)	✓	✓	✓	✓	✓	✓	
10.7	Mey Bum (Dry Cupping)	✓	✓	✓	✓	✓	✓	
10.8	Mey Bum (Wet Cupping)	✓	✓	✓	✓			
10.9	Kam khab Ref <sup>43</sup>	✓	✓	✓	✓			
10.10	Nuum tshuk (Hot oil compression)	✓	✓	✓	✓	✓	✓	
10.11	Tshug rig (Other compression)	✓	✓	✓	✓			

<sup>36</sup> National Traditional Medicine

<sup>37</sup> Regional Referral Hospital

<sup>38</sup> 40-60 bedded Hospital

<sup>39</sup> 20 bedded Hospital

<sup>40</sup> 10 bedded Hospital

<sup>41</sup> Primary Health Centre

<sup>42</sup> Thromde Health Centre

<sup>43</sup> Establishment of Kamkhab to be based on high level approval

S/N	TYPE OF SERVICE	NTM H <sup>44</sup>	RRH 45	H 1 <sup>46</sup>	H2 <sup>47</sup>	H3 <sup>48</sup>	PHC <sup>49</sup>	THC <sup>50</sup>
<b>11</b>	<b>Lay Nga services</b>							
11.1	Shel (laxative therapy)	✓	✓					
11.2	Chuug (Emesis)	✓	✓					
11.3	Najong (Nasal cleansing)	✓	✓	✓	✓	✓	✓	
11.4	Jamtsi (Oil enema)	✓	✓					
11.5	Niruha (Decoction enema)	✓	✓					

### 1. Identified CEmONC & Trauma Centres

1. JDWNRH, Thimphu
2. CRRH, Gelephu
3. ERRH, Monggar
4. Phuntsholing Hospital, Chhukha
5. Damphu Hospital, Tsirang
6. Dewathang Hospital, Samdrupjongkhar
7. Paro Hospital, Paro
8. Punakha Hospital, Punakha
9. Trashigang Hospital, Trashigang
10. Trongsa Hospital, Trongsa
11. Yebilaptsa Hospital, Yebilaptsa

### 2. Identified Trauma Centers:

1. Gedu Hospital, Chhukha
2. Riserboo Hospital, Trashigang

### 3. Identified Blood Centers:

1. JDWNRH, Thimphu
2. ERRH, Monggar
3. CRRH, Gelephu
4. Phuntsholing Hospital, Chhukha
5. Trongsa Hospital, Trongsa
6. Samdrup Jongkhar Hospital, Samdrup Jongkhar

### 4. Identified Cyto Centers:

1. JDWNRH, Thimphu
2. ERRH, Monggar
3. CRRH, Gelephu
5. Phuntsholing Hospital, Chhukha
6. Lhuentse Hospital, Lhuentse
7. Pema Gatshel Hospital, Pema Gatshel
8. Samtse Hospital, Samtse
9. Trashigang Hospital, Trashigang
10. Damphu Hospital, Tsirang
11. Wangdue Phodrang Hospital, Wangdue Phodrang
12. Dagapela Hospital, Dagana

### 5. Identified Antimicrobial Resistance Centers:

1. JDWNRH, Thimphu
2. ERRH, Monggar
3. CRRH, Gelephu
5. Phuntsholing Hospital
6. Paro Hospital, Paro
7. Punakha Hospital, Punakha
8. Samdrup Jongkhar Hospital, Samdrup Jongkhar
9. Samtse Hospital, samtse
10. Trashigang Hospital, Trashiang

### 6. National Tuberculosis, Leprosy and Prosthetic & Orthotic Centre:

1. Gidakom Hospital, Thimphu

