	Tertiary Care	5	econdary Car	e	Primary Care					
LEVELS	Tertiary Hospital	Hospital Gr 3	Hospital Gr 2	Hospital Gr 1	HC Gr 4		HC Gr 3	HC Gr 2	HC Gr 1	
					Health Center	Area Specific Center				
WORKING HOURS	24hrs	24 hrs	24 hrs	24 hrs	24 hrs	16hrs	24 hrs	16 hrs	8 hrs	
CRITERIA										
Patient load (OP)/year	>50,000	35,001-50,000	15,001- 35,000	5001-15,000		-1.8.4	-144.7	-	-	
Average bed occupancy/year based on IP oed capacity	60% 100 beds	60% of 50 beds	60% of 25 beds	60% of 12 beds	60% of 12 beds	Nil	60% of 12 beds	60% of 4 beds	60% of 2 beds	
Exemption criteria	- 14	-	-	>+10nm & pop >1700	-	Nil	-	-		
Population							1001-5001	501-1000	<500	
Availability and sustainability of designated services	1	1	1	1	1	1	~	1	~	
SERVICES										
Community Health Services	PHU	PHU	PHU	PHU	PHU/ CHO	Nil	PHU/ CHO	СНО	FHO/CHO	
Family Protection Services	FPU	FPU	FPU	FPU	FPU/CHO	-	FPU/CHO	SSO	-	
Emergency Services	Specialty A & E	Specialty A & E	Specialty A & E	General & Maternity A & E	General A & E	Area Specific Basic A &E	General A & E	General A & E	Basic First Aid Servic	



	Sea and Land EMS	Sea and Land EMS	Sea and Land EMS	Sea and Land EMS	Land EMS	Land EMS	Land EMS	Land EMS	-		
Surgical	OT (s)	OT (s)	OT (s)	OT (s)	+	-	-		-		
General Ambulatory Services	-	GP Service	GP Service	GP Service	GP Service	GP Service	GP Service	GP Service	-		
	Medicine	Medicine	Medicine	Medicine	- 1994 B/2416		-	-	-		
	Surgery	Surgery	Surgery	*Surgery	- 64		-	-	-		
	Peadiatrics and neonatology	Peads	Peads	Peads	Paeads		-	-	-		
	Obs & Gynae	Obs & Gynae	Obs & Gynae	Obs & Gynae	Obs & Gynae		-	-	-		
	Dental	Dental	Dental	- 19	-	*Area	-154 6	-	-1846		
Specialties	Ortho	Ortho	Ortho		-	Specific (if required with	-	-	-		
Specialities	Dermatology	Dermatology	-	-	- 19	adequate technical	-12/14		-		
	Psychiatry	Psychiatry	-	- 99.35	-	justification)		-	-		
	Minor OT	Minor OT	Minor OT	Minor OT	Minor OT		4,0121	-	-		
	Ophthal	Opthal	Opthal	-	-		-	-	-		
	ENT	ENT	-	-	-		- 40	- 2 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1	- 11 - 11		
	Anesthesia	Anesthesia	Anesthesia	Anesthesia	Anesthesia		-	-			



Sub specialties	selected from Annex 1 -		-	-	-	-	-	-	
Clinical Therapy Services	inical Therapy Services Gen & Sp Physiotherapy Gen & Sp Physiotherapy		general Physiotherapy						
Diagnostic Services	Ref Med. Lab	Medical Lab L II		Med Lab L II	Medical Lab LI	*Area Specific (if	Medical Lab LI	Min Tests	Min Tests
Diagnostic Services	Adv Radiology	Radiology III	Radiology II	Radiology II	Radiology I	required with adequate	Radiology I	-	-
Blood transfusion Services	BTS	Blood Bank	Blood Bank	Blood storage center	Blood storage center	technical justification)			-
Medical Supplies	Supplies Medical Store Medical Store		Medical Store	Medical Store	Medical Store	Medical Store	-	-	-
Sterile supplies	upplies CSSD CSSD		CSSD	CSSD	CSSD	CSSD	Sterilization equipment		
Medicines	Pharmacy L1	Pharmacy L1	Pharmacy L1	Pharmacy L1	Pharmacy L1	- /	Pharmacy L1	Pharmacy L1	Pharmacy L2
	Tertiary EML	Secondary EML	Secondary EML	Secondary EML	Secondary EML	Primary EML	Primary EML	Primary EML	Primary EML



## **CRITERIA FOR GRADING HEALTH FACILITIES**

# Minimum criteria to be fulfilled for upgrading a facility will be:

- Hospitals should fulfill criteria for patient load and bed occupancy plus meet the minimum requirement for criteria "Availability and sustainability of designated services".
- Health Centers should fulfill any of the two criteria's from; patient load, bed occupancy and population plus meet the minimum requirement for criteria "Availability and sustainability of designated services".
- Exemption Criteria-Time to hospital >1 hr (>or = to 10 nautical miles to the hospital). If >500 - HF - Gr.3. If population <500 HF Gr. 4 services will be provided. If previous Atoll Hosp. current facilities to be maintained. Islands with airports, industrial sites and other extensive small medium enterprises could be upgraded to HC Gr 1 according to the demand.
- \*Surgery: A surgeon will be allocated to Hospital Grade 3 if the facility is a Regional Hospital.
- Area Specific Centers Ministry of Health will establish centers as per the need required for specific health services according to national needs.

Eg: Center for blood services – Maldives Blood Services

Disease specific services - Thalassemia and other haemoglobinopathy center



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Annex 1 Subspecialties for Tertiary care Health Facilities, Annex: 2 Grading of Radiology; Annex3 Grading of Medical Laboratories. Annex: 4 Work Force based on patient load. Annex – 5 Area Specific Centers

## **Annex 1: Sub Specialties for Tertiary care**

- 1. Cardiac Centre Cath lab
- 2. Dialysis/nephrology & urology
- 3. Radio and chemotherapy
- 4. Neurology/neurosurgery
- 5. Neonatology
- 6. Thalassaemia and Blood disorders
- 7. Trauma Centre
- 8. Detoxification centre
- 9. Mental Health Services
- 10. Complimentary Medicine / Alternative Medicine

Other subspecialties may be considered as per need

## **Annex 2: Grading of Radiology services**

Advanced Radiology Services: MRI, CT, X-ray, US Scan

Radiology Level I: US Scan

Radiology Level II: X-ray and US Scan

Radiology Level III: CT, X-ray and US Scan



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## Annex 3: Grading of Medical labs

## Tests for lab L-III services

Haematology			Biochemistry		Serology
1	Haemoglobin	31	Blood Glucose	60	ASOT
2	WBC Count	32	Glucose Tolerance Test	61	RAF
3	Differential Count	33	Blood Urea	62	Widal
4	ESR	34	S.Creatinine	63	CRP
5	Haematocrit	35	S. Uric Acid	64	HBsAg Screening
6	RBC Indices	36	S. Cholesterol	65	HIV Screening
7	Platelet Count	37	HDL Cholesterol	66	HCV Screening
8	Absolute Eosinophil Count	38	S. Triglycerides	67	VDRL
9	Bleeding Time	39	S. Bilirubin	68	Dengue Ag test.*
10	Clotting Time	40	AST		
11	Direct Coombs Test	41	ALT		Clinical Pathology
12	Indirect coombs Test	42	AlkalinePhosphatase	69	Urine Albumin
13	Blood smear morphology	43	LDH	70	Urine Sugar
14	Haemoparasites	44	GGT	71	Urine Microscopy
15	Prothrombin Time /INR	45	Serum Proteins	72	Urine -Specific Gravity
16	APTT	46	Serum Albumin	73	Urine Bile salts
17	G6PD	47	Serum Globulin	74	Urine Bile pigments
	Microbiology	48	СК	75	Urobilinogen
18	Aural swab culture	49	СК-МВ	76	Urine and Serum beta HCG
19	CSF culture	50	S. Na+	77	Stool - routine
20	HVS culture	51	S.K+	78	Stool - reducing substances
21	Nasal swab culture	52	S.CI-	79	Stool - occult blood
22	Urine culture	53	S. Amylase	80	Work Permit Medical
23	Stool culture	54	S.Phosphorous	81	Food Handler's Medical
24	Throat swab culture	55	HbA1C*	82	Semen Analysis
24	Throat swab culture	55	HbA1C*	82	Semen Analysis
25	Gram staining for GC	56	Troponin T		
	Antibiotic susceptibility				
26	test	Blo	od Transfusion Services		
27	CSF analysis	57	Blood Group		
28	CSF- bacterial antigen test	58	Rh Typing		
29	AFB Microscopy	59	Crossmatching		IS I
30	Mantoux skin test				[13] e
					12 (2)
spec	imen collection and transport of	of clin	ical specimens to other cent	ers fo	r testing
/olu	ntary Counseling and Testing se	ervice	s for HIV		1. J.

Dengue IgG -rapid test for epidemic and outbreak confirmation

\* These tests to be introduced.

## **Tests for lab L- II services**

	Haematology		Biochemistry		Serology
1	Haemoglobin	29	Blood Glucose	58	ASOT
2	WBC Count	30	Glucose Tolerance Test	59	RAF
3	Differential Count	31	Blood Urea	60	Widal
4	ESR	32	S.Creatinine	61	CRP
5	Haematocrit	33	S. Uric Acid	62	HBsAg Screening
6	RBC Indices	34	S. Cholesterol	63	HIV Screening
7	Platelet Count	35	HDL Cholesterol	64	HCV Screening
8	Absolute Eosinophil Count	36	S. Triglycerides	65	VDRL
9	Bleeding Time	37	S. Bilirubin	66	Dengue Ag test.*
10	Clotting Time	38	AST		
11	Direct Coombs Test	39	ALT		Clinical Pathology
12	Indirect coombs Test	40	AlkalinePhosphatase	67	Urine Albumin
13	Blood smear morphology	41	LDH	68	Urine Sugar
14	Haemoparasites	42	GGT	69	Urine Microscopy
15	G6PD	43	Serum Proteins	70	Urine -Specific Gravity
		44	Serum Albumin	71	Urine Bile salts
		45	Serum Globulin	72	Urine Bile pigments
Microbiology		46 CK		73	Urobilinogen
13	Aural swab culture	47	CK-MB	74	Urine and Serum beta HCG
17	CSF culture	48	S. Na+	75	Stool - routine
18	HVS culture	49	S.K+	76	Stool - reducing substances
19	Nasal swab culture	50	S.Cl-	77	Stool - occult blood
20	Urine culture	51	S. Amylase	78	Work Permit Medical
21	Stool culture	52	S.Phosphorous	79	Food Handler's Medical
22	Throat swab culture	53	HbA1C*		
23	Gram staining for GC	54	Troponin T		
	Antibiotic susceptibility				
24	test	Blo	od Transfusion Services		
25	CSF analysis	55	Blood Group		
26	CSF- bacterial antigen test	56	Rh Typing		
27	AFB Microscopy	57	Crossmatching		
28	Mantoux skin test				
Spec	imen collection and transport o	of clir	ical specimens to other cent	ters fo	r testing
	gue IgG -rapid test for epidemic				
	ese tests to be introduced.				in a

Haematology (microscope)			Biochemistry	Serology			
1	Haemoglobin	19	Blood Glucose	34	ASOT		
2	WBC Count	20	Glucose Tolerance Test	35	RAF		
3	Differential Count	21	Blood Urea	36	Widal		
4	ESR	22	S.Creatinine	37	CRP		
5	Haematocrit	23	S. Uric Acid	38	HBsAg Screening		
6	Platelet Count	24	S. Cholesterol	39	HIV Screening		
7	Absolute Eosinophil Count	25	HDL Cholesterol	40	HCV Screening		
8	Bleeding Time	26	LDL Cholesterol	41	VDRL		
9	Clotting Time	27	S. Bilirubin	42	Dengue Ag test		
10	Direct Coombs Test	28	AST				
11	11 Indirect coombs Test		ALT		Clinical Pathology		
12	Blood smear morphology	30	S. Na+	43	Urine Albumin		
13	Haemoparasites	31	S. K+	44	Urine Sugar		
	G6PD	32	S. Amylase	45	Urine Microscopy		
Blo	od Transfusion Services	33	Troponin T	46	Urine -Specific Gravity		
14	Blood Group			47	Urine Bile salts		
15	Rh Typing			48	Urine Bile pigments		
16	Crossmatching			49	Urobilinogen		
_				50	Urine and Serum beta HCG		
Mic	robiology			51	Stool - routine		
17	AFB Microscopy			52	Stool - reducing substances		
18	Mantoux skin test						
Spec	imen collection and transport of	clinical	specimens to other centers for	testir	ng		
Volu	ntary Counselling and testing for	HIV					
	gue IgG -rapid test for epidemic a		break confirmation				

### Tests for lab L- I services

#### **MINIMUM LABORATORY TESTS**

Test	Method			
Urine Albumin				
Urine Sugar	Multistix			
Urine Ketone				
Blood Glucose	Glucometer			
Haemoglobin	Haemacue or equivalent			
Urine pregnancy	Pregnancy device			



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# **ITEMS REQUIRED FOR SPECIMEN TRANSPOTATION**

	sample collection material
1	Screw capped Vacutainer <sup>®</sup> blood collection tube containing EDTA anticoagulant that draws 3ml blood
2	Screw capped Vacutainer <sup>®</sup> blood collection tube containing Sodium Fluoride anticoagulant that draws 3ml blood
3	Screw capped Vacutainer <sup>®</sup> blood collection tube containing no additives that draws 5ml blood
4	Screw capped Microcentrifuge tubes, 2ml, Clear, polypropylene
5	Sterile, screw capped 2 ml vials to collect urine specimen
6	Syringes 3ml
7	Syringes 5ml
8	Tourniquet
9	Spirit 500ml
10	Cotton 500g
11	Labeling material
	Packaging material
1	Zip lock polythene bag (size 12" x 8")
2	Cool box with handle or bag must be provided for easy carry
3	water proof labelling pen
4	cotton wool or absorbent material
	Note: general packing material such as tape must be provided
	Personnel protective equipment's such as gloves , lab coat , must be provided



# Annex 4: Work Force based on Patient load.

#### Specialists (consultants) for surgical specialties

- Patient load >1000/yr the specialty could be established and/sustained
- Patient load >3000/yr additional specialist could be employed.( ie one consultant for every 3000 patients/yr)
- Surgical patient load >500/yr additional anaethetist could be employed.(With the establishment of surgical specialty an anaesthetist could be employed)

#### Specialists (consultants) for NON surgical specialties.

- Patient load >2000/yr the specialty could be established and sustained
- Patient load >6000/yr additional specialist could be employed.( ie. one consultant for every 3000 patients/yr)

### **General Practitioners (Medical Officers)**

 Patient load >3000/yr additional specialist could be employed.( ie. one GP for every 3000 patients/yr)

### Community Health Practitioners (only at primary care)

 Patient load >1000/yr additional practitioner could be employed.( ie. one CHP for every 1000 patients/yr)

#### **Community Health/Public health workers**

- 1 Public Health manager
- 1 CHO per 1000 population up to a maximum of 10.
- 2 additional CHOs if international ports are serviced by CHU



#### <u>Nurses</u>

- ICU/CCU/NICU-1:1 per bed
- OT- 5 per OT
- Casualty ER: 1: 1 per bed; Casualty Observation 1: 3 bed + 1 Triage nurse
- Surgical/specialty wards: 1:4 bed morning shift; 1:4 evening shift; 1:6 night shift
- Gynae/medical/paediatric wards: 1:3 bed morning shift; 1:3 evening shift; 1:5 night shift
- Labour room: First stage 1:2bed; Delivery room: 3:1bed
- OPD: Dressing/Injection: 1per room
- Blood bank: 1:3 beds
- Dialysis: 1:2beds
- Private ward: 1:2 rooms
- Isolation ward: 1: 2beds
- 5% of total nurses as relief

#### Auxiliary Nurse midwives:

- 1 per health facility at primary care levels
- Maternity patient load >500/yr additional ANM could be employed

#### **Physiotherapists**

- Patient load >500/yr could be established and sustained.
- Patient load >1000/yr additional physiotherapist could be employed
- Specialized therapists as per need in tertiary health facility

#### Laboratory Technologists

- Referral lab: 4 lab technologists; microbiologist pathologist (1)
- 1 lab technologist for lab level 1, microbiologist(1),

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- 2 lab technologist for lab level 2, .
- 3 lab technologist for lab level 3, .
- Additional lab 2 lab technologists on establishment of blood • transfusion services;

#### **Radiographers**

- Radiographer to be employed on establishment of Xray services
- X-rays processed exceeds >1000/yr; additional radiographer could be employed

#### **Counsellors**

- One counselor per FPU established •
- Patient load to FPU is >500/yr additional counselor could be employed

#### Pharmacists& Stock keepers

- One pharmacist per pharmacy/medical store
- Patient load is >5000/yr, one store keeper to be employed
- Patient load is >10,000/yr additional store keepers to be employed

#### Admin & support Staff

• As per requirement based on need & model of service delivery

### Annex 5

### **Area Specific Centers**

These are centers which provide service according to a specific area.



# Annex 5.1

#### <u>Dhamanaveshi</u>

Urban Health center providing Public health relate services

Services include:

- General Consultation
- NCD Clinic
- Tobacco cessation clinic
- Mental health clinic
- Immunization

# Annex 5.2

#### Maldives Blood Services

- Donor screening
- Donor Bleeding
- Blood transfusion
- Consultation for thalassemia patients

