

**बिपन्न नागरिक औषधी उपचार कार्यक्रम अन्तर्गत मुटु रोग सम्बन्धी स्ट्याण्डर्ड चेकलिष्ट र मापदण्ड**

क्र.सं.	विवरण	न्यूनतम आवश्यकता	छ	छैन	कैफियत
१	क्याथ ल्याब				
१.१	भौतिक पूर्वाधार				
क	सामान्य उपकरण र फर्नीचरहरु एनेक्स १ अनुसार हुनु पर्ने				
ख	औषधि र अन्य सामानहरु एनेक्स २ अनुसार हुनु पर्ने				
ग	Intervention को लागि आवश्यक surgical set एनेक्स ३ अनुसार हुनु पर्ने				
घ	रिक्भरी कोठा र नियन्त्रण कोठाको साथ क्याथ ल्याबको लागि अलग कोठा				
ङ	सफा र फोहोर सामानहरु भण्डारणको लागि छुट्टाछुट्टै स्थान				
च	scrub गर्नको लागि कुहिना सम्म हात धुन मिल्ने गरि डिजाईन गरिएको हात धुने ठाउको सुविधा				
छ	सल्यक्रिया (अपरेटिङ) टेबल	१			
१.२	क्याथ ल्याबका लागि न्यूनतम आवश्यकता				
क	Coronary Angiography				
ख	PCI				
ग	Percutaneous trans luminal coronary angioplasty/ percutaneous coronary intervention(PTCA)				
घ	Right heart catheterization				
ङ	Pigtail insertion (Pericardiocentesis)				
१.३	Post procedure care				
क	प्रक्रिया पछि बिरामीलाई स्थिर गर्न अलग क्षेत्र				
ख	प्रक्रिया पछि हेरचाहको लागि छुट्टै एक सेट कर्मचारी				
१.४	समय				
क	बिहान ९ बजे देखि अपराह्न ३ बजे सम्म र आकस्मिक सेवामा पनि उपलब्ध हुनु पर्ने				
१.५	जनशक्ति				
क	कार्डियोलोजिष्ट वा MD internal medicine trained in cardiac intervention	१			
ख	तालिम प्राप्त मेडिकल अधिकृत	१			
ग	Full time मुटु शल्यचिकित्सक	२			जस मध्ये एक परामर्शदाता तहको हुनुपर्छ वा कम्तिमा २ वर्ष मुटु शल्यक्रियामा अनुभव हुनुपर्दछ
घ	Cardiac anesthesiologist	१			Cardiac anesthesia कम्तिमा २ वर्षको अनुभव भएको
ङ	Qualified perfusionist on call available (optional for cardiac surgery)	१			
च	तालिम प्राप्त critical care nurse (इन्चाज सहित)	२ र आवश्यकता अनुसार अन्य ठाउमा थप			

छ	तालिम प्राप्त कार्यलय सहयोगी	१			
२	CCU को लागि नर्सिंग इन्चार्ज, तालिम प्राप्त critical care nurse सहित पूर्ण सेटको कर्मचारीहरू	१ + ६ + .....			
२.१	<b>भौतिक पुर्वाधार</b>				
क	भेन्टिलेटरहरू, मोनिटरहरू, इन्फ्यूजन पम्पहरू सहितको CCU	५			
ख	केन्द्रीय मनिटरहरू जडान गरी प्रत्येक bed को देखिने केन्द्रीय नर्सिङ स्टेशन	१			
ग	Proper bed area allocated (एनेक्स ७ मा हेर्नुहोस्)				
घ	राम्रो प्रकाश सहित उज्यालो भएको कोठा				
२.२	<b>जनशक्ति</b>				
क	एनेक्स ७ अनुसारको कर्मचारीहरू				
३	<b>Echo</b>				
३.१	<b>भौतिक पुर्वाधार</b>				
क	Light र ventilation सहितको छुट्टै कोठा	५			
ख	छुट्टै changing कोठा				
ग	म्याट्रेस, बेड कभर र सिरानी सहितको बेड र पर्दा				
३.२	<b>समय</b>				
क	बिहान ९ बजे देखि अपराह्न ३ बजे सम्म र आकस्मिक सेवामा पनि उपलब्ध हुनु पर्ने				
३.३	<b>जनशक्ति</b>				
क	कार्डियोलोजिष्ट				
ख	क्रिटिकल केयर नर्स वा मध्य स्तरको स्वास्थ्यकर्मी	१			
३.४	<b>मेसिन तथा उपकरण</b>				
क	Echo machine (2D, M-mode, color doppler )				
ख	Trans esophageal echo	Optional			
ग	Holter monitoring	Optional			
घ	Ambulatory BP	Optional			
४	<b>Treadmill</b>				
४.१	<b>भौतिक पुर्वाधार</b>				
क	TMT को लागी छुट्टै कोठा , change गर्ने कोठा, बिरामीका लागि गाउन र बिरामीहरूका सामानहरूका लागि लकर				
ख	Light and ventilation				
४.२	<b>समय</b>				
क	बिहान ९ बजे देखि अपराह्न ३ बजे सम्म र आकस्मिक सेवामा पनि उपलब्ध हुनु पर्ने				
४.३	<b>मेसिन तथा उपकरणहरू</b>				
क	TMT machine				
ख	Emergency trolley with emergency drugs and supplies (See Annex 4 Emergency Trolley TMT)				
५	<b>ECCG</b>				
५.१	<b>भौतिक पुर्वाधार</b>				

क	उपयुक्त प्रकाश र भेन्टिलेशन सहितको ECG को लागि छुट्टै कोठा				
ख	छुट्टै changing कोठा				
५.२	<b>समय</b>				
क	बिहान ९ बजे देखि अपराह्न ३ बजे सम्म र आकस्मिक सेवामा पनि उपलब्ध हुनु पर्ने				
५.३	<b>मेसिन तथा उपकरण</b>				
क	ECG machine (12 lead with power back up)				
६	<b>सर्जरी</b>				
क	गत बर्ष कम्तिमा ५० वटा open heart सर्जरी गरेको				
६.१	<b>भौतिक पूर्वाधार</b>				
क	सम्पूर्ण सामग्री सहितको ICU (भेन्टिलेटरहरू, मोनिटरहरू, इन्फ्यूजन पम्पहरू सहित)	१० बेड			
ख	interventional cardiac सेवा सहितको क्याथ ल्याब सेवा				
६.२	<b>जनशक्ति</b>				
क	Full time कार्डियाक सर्जनहरू	२			जस मध्ये एक परामर्शदाता तहको हुनुपर्छ वा कम्तिमा १० वर्षको हृदय शल्यक्रियाको अनुभव हुनुपर्छ।
ख	कार्डियक एनेस्थेसियोलोजिस्ट	१			कार्डियाक एनेस्थेसियामा कम्तिमा १० वर्षको अनुभवको
ग	Qualified perfusionist on call available	१			
७	<b>Support Services</b>				
७.१	<b>परामर्श सेवा</b>				
क	परामर्श सेवा अगाडी सहमति लिएको				
ख	ECG, ECHO, TMT सेवाको प्रक्रिया र indication बारेमा परामर्श				
७.२	<b>संक्रमण रोकथाम र नियन्त्रण</b>				
क	साबुन र सफा पानि सहित हात धुने सुबिधा				
ख	डाक्टर, नर्स र भिजिटरको लागि गाउन, चप्पलको व्यवस्था				
ग	उच्च स्तरको डिसइन्फेक्सन र फ्युमिगेसन	क्याथ ल्याबमा कम्तिमा हप्ता मा १ चोटी			
घ	उच्च स्तरको सरसफाई र डिकन्टामिनेशन	क्याथ ल्याबमा कम्तिमा हप्ता मा २ चोटी			
ड	Hand hygiene को बिकास गर्ने र ICU बेडहरूमा अल्कोहलले हात पुछ्ने वा स्यानिटाइजरको प्रयोग गर्ने				

### Annex 1 Furniture, Equipment, Instruments and Supplies for Cath Lab

SN	General Equipment and Instruments for OT	Standard Quantity	YES	NO	REMARKS
1.	Wheel chair foldable, adult size	1			
2.	Stretcher	1			
3.	Patient trolley	1			
4.	Cupboards and cabinets for store	1			
5.	Working desk for anesthesia, nursing station, gowning	1 each			
6.	OT Table- universal type/ with wedge to position patient	At least 1			
7.	Fluoroscope	At least 1			
8.	Cardiac Monitors	At least 2			
9.	Computer with display monitor and printer in control room	At least 1 set			
10.	Examining table	At least 1			
11.	Mayo Stand with tray	At least 2			
12.	Operation theatre lights	At least 1			
13.	Ultra violet light source	At least 1			
14.	Electronic suction machine/ Foot-operated suction machine	At least 1/1			
15.	Refrigerator / cold box	At least 1			
16.	Boiler/ Autoclave	At least 1/1			
17.	Oxygen concentrator/ Oxygen Cylinder/ Central oxygen	At least 1/1/available			
18.	Instrument trolley	At least 2			
19.	BP instrument with stethoscope	At least 1			
20.	Thermometer	At least 1			
21.	Steel Drum for gloves	At least 1			
22.	Steel Drum for Cotton	At least 1			
23.	Tourniquet, latex rubber, 75 cm	At least 2			
24.	Kidney tray (600cc)	At least 2			
25.	Covered instrument trays	At least 4			
26.	Mackintosh sheet	At least 1			
27.	Lead gown	At least 2 sets			
28.	Bowl stand	At least 2			
29.	Cheatle forceps in jar	At least 2			
30.	Packing towel double wrapper	As per need			
31.	Sterile gloves (6,6.5,7,7.5,8)	5 each			
32.	Towels/ eye hole	As per need			
33.	Masks and caps	As per need			
34.	Torch light and batteries	1 set			
35.	Foot steps	At least 2			
36.	Wall clock	At least 1			
37.	Waste bucket for scrub nurse	At least 1			

38.	IV stand	At least 2			
39.	Big tray, Big bowl, small bowl, kidney tray, sponge holder	At least 2 each			
40.	Lap Pack	At least 2			
41.	IV set and PMO line	At least 10 each			
42.	Leak proof sharp container	At least 1			
43.	Color coded waste bins (based on HCWM guideline 2014 (MoHP))	1 set per OT			
44.	Disposable syringes of different size, 3 way connector	As per need			

## Annex 2 Medicine and Supplies for Cath Lab

SN	Emergency Drugs (including neonates) for OT	Standard Quantity for 1 patient	YES	NO	REMARKS
1.	Verapamil Injection	4 ampules			
2.	Heparin Injection	2 vials			
3.	Midazolam Injection	5 vials			
4.	Hydrocortisone Powder for Injection	100ml 2 vial			
5.	Fruzemide Injection	2 ampules			
6.	Dopamine Injection	5 vials			
7.	Hydralazine injection	5 vials			
8.	Calcium Gluconate Injection	10ml X 2 ampules			
9.	Dextrose (25%/50%) Injection	2 ampules each			
10.	Naloxone Injection	1 ampule			
11.	InjDobutamine				
12.	InjAmiodarone				
13.	Inj Atropine				
14.	Inj Adrenaline				
15.	Inj Nor adrenaline				
16.	Aminophylline Injection	2 ampules			
17.	Chlorpheniramine Injection	2 ampules			
18.	Mephentine Injection	1 vial			
19.	IV Fluids- Ringer Lactate / Normal Saline/ DNS/ D5%	6 bottles each			
20.	IV infusion Set	4			
21.	IV Canula 22G/20G/18G	4 each			

### Annex 3 Minimum List of Surgical Sets for Intervention

S.No.	Items	Required number	YES	NO	REMARKS
1.	Catheterization set	At least 5			
2.	Coronary angiography set	At least 2			
3.	PTCA kit	At least 2			
4.	TPI Set	At least 2			
5.	Swan Ganz Catheter	At least 2			
6.	Teurmo Wire J tip	At least 5			
7.	Radial/ femoral sheath 5 Fr	At least 10 each			
8.	Port manifold	At least 10			
9.	Ordinary wire	At least 5			
10.	Mersilk (2-0) cutting body	As per need			
11.	Pigtail 5/6 Fr	At least 5			

### Annex 4 Emergency Trolley TMT

SN	Name	Required No	YES	NO	REMARKS
1.	Atropine Injection	At least 10			
2.	Adrenaline Injection	At least 3			
3.	Xylocaine 1% and 2% Injections with Adrenaline	At least 2			
4.	Xylocaine 1% and 2 % Injections without Adrenaline	At least 2			
5.	Xylocaine Gel	At least 2			
6.	Diclofenac Injection	At least 5			
7.	HyoscineButylbromide Injection	At least 5			
8.	Diazepam injection	At least 2			
9.	Morphine Injection / Injection Pethidine	At least 2			
10.	Hydrocortisone Injection	At least 4			
11.	Antihistamine Injection	At least 4			
12.	Dexamethasone Injection	At least 4			
13.	Ranitidine/Omeperazole Injection	At least 4			
14.	Frusemide Injection	At least 5			
15.	Dopamine injection	At least 2			
16.	Noradrenaline injection	At least 2			
17.	Digoxin injection	At least 2			
18.	Verapamil injection	At least 2			
19.	Amidarone injection	At least 2			
20.	GTN	At least 1			
21.	Labetolol injection	At least 1			
22.	Sodium bicarbonate injection	At least 2			
23.	Injection Metronidazole	At least 4			
24.	D25% ampoule	At least 2			
25.	IV Infusion set (Adult/Pediatric)	At least 2			
26.	IV Catheters 18, 20, 22, 24, 26	At least 2 each			
27.	Disposable syringes 1 ml, 3 ml, 5 ml, 10 ml, 20	At least 5			

	ml, 50 ml	each			
28.	Disposable Gloves 6, 6.5, 7, 7.5	At least 3 each			
29.	Distilled Water	At least 3			
30.	Needle 18-25	As per need			
31.	Ezivac (for enema) or Enema Can Set	5/1			

#### Annex 5 Furniture and Supplies for OPD

	General Items	Required No.	YES	NO	REMARKS
1	Working desk	1 for each practitioner			
2	Working Chairs	1 for each practitioner			
3	Patient chairs	2 for each working desk			
4	Examination table	1 in each OPD room			
	Foot Steps	1 in each OPD room			
5	Curtain separator for examination beds	In each examination bed			
6	Shelves for papers	As per need			
7	Weighing scale	Adult and Child			

### Annex 6 Basic Equipment and Instruments for OPD

S.N.	Basic equipment and instruments	Required No.	Yes	No	Remarks
1.	Stethoscope	1 for each practitioner			
2.	Sphygmomanometer* (non-mercury) (*Pediatric size in pediatric OPD)	1 for each practitioner			
3.	Thermometer (digital)	2 in each table			
4.	Jerk hammer	1 for each practitioner			
5.	Flash light	1 for each practitioner			
6.	Disposable wooden tongue depressor	As per need			
7.	Hand sanitizer	1 in each table			
8.	Examination Gloves	As per need			
9.	X-Ray View Box	1 in each OPD			
10.	Measuring tape	1 in each table			
11.	Tuning fork	1 in each table			

### Annex 7 Proper Bed Area for ICU

S.No.	Appropriate bed space and supplies	YES	NO	REMARKS
1.	100 sq. ft per patient care area			
1.	Bed length: 7 ft; Bed width: 3.5 ft			
2.	The head end of the bed must be kept at least 2 ft from the wall to have adequate access for endotracheal intubation, resuscitation, and central venous catheterization			
3.	The foot end of the bed must be kept at least 3 ft from the corridor or wall.			
4.	Space between the two adjacent beds: 5 ft			
5.	Wall or ceiling mounted pendants to reduce the space requirements and to provide hindrance free and smooth accessibility at the head end of the bed.			
6.	Utilities per bed in the pendant: 2 oxygen outlets with flow meters, 2 vacuum, 8 universal electric outlets distributed on both sides of the bed.			

### Annex 8 Staffing for Intensive Care Services ICU

S.No.	Staffing of ICU	Required Number	Yes	NO	REMARKS
1.	ICU Coordinator with at least MD Anesthesiology (dedicates 50% professional time for ICU)	At least 1 (Optional)			
2.	Admitting consultant on duty	At least 1			
3.	One trained medical officer for each 5 bed	At least 1 per shift			
4.	Nurse in-charge with 5 years' experience in ICU with at least Nursing officer (Bachelors' degree in critical care/ critical care trained)	At least 1			
5.	Critical care Nurse: patient ventilated and multi-organ failure patients	1:1			
6.	Critical Care Nurse: Patients ventilated or multi-organ failure patients	2:3			
7.	Critical Care Nurse: Patients less seriously sick patients who do not require above modalities.	1:2			
8.	IP trained office assistants	1 in each shift for 5 bedded ICU			
9.	Security staffs	2 in each shift			
10.	Biomedical technician/engineer on duty	At least one			

### Annex 9 Equipment, Instrument and Supplies for ICU

S.N.	Equipment, Instrument and Supplies for ICU	Required number	YES	NO	REMARKS
1.	ICU bed (With mattress, two iv stands and all position possible: height adjustment, back section and leg section adjustment, tredelenberg and reverse trendelenberg position)	one per bed			
2.	Bedside Patient monitor (Modular - ECG, SPO2, NIBP, RR, Temp Probes with trays) upgradable to invasive BP monitoring	one per bed			
3.	Bedside Patient monitor (Modular - ECG, SPO2, NIBP, 2 Invasive BP, RR, Temp Probes with trays)	two out of five monitors			

4.	ICU Ventilator (With pediatric and adult provisions, graphics and Non- Invasive Modes, Humidifier, inbuilt nebulization, turbine/air-compressor)	one per bed			
5.	BiPAP Machine	two for five beds			
6.	Synchronized Defibrillator (manual and automated with transcutaneous pacing facility)	Optional			
7.	Syringe pumps	4 per bed			
8.	Infusion pumps	1 per bed			
9.	Over Bed Table	1 per bed			
10.	Bedside Cabinet	1 per bed			
11.	Handheld Pulse oximeter	At least 2			
12.	ABG Machine	At least 1			
13.	Hemodialysis Machine	At least 1			
14.	Intermittent Leg Compressing Device to prevent DVT	1 per bed			
15.	Air mattress	1 per bed			
16.	Crash/Resuscitation trolley	At least 1			
17.	Glucometer	At least 2			
18.	Portable X-ray machine	At least 1			
19.	Clinical Lab facility with lactate value, culture and sensitivity	Available			
20.	Warming devices: blanket, blower	As per need			