

Annex I

1. Detail Cost estimation of a patient per day in the ward

Cost estimation of land

The current cost of land in Monaragala hospital was obtained from the Pradesheeya sabha and cost of lands in adjacent areas was taken for comparison and to calculate an average value.

Description	Amount
Cost of one perch in the Monaragala Town area	Rs.300,000.00
1 Perch = 272.25 square feet	
Cost of 1 square feet	$\text{Rs.}300,000.00/272.25 = \text{Rs.}1101.91$
Total square feet in the ward	5300
Assumption – Possibility of giving the land on a 30-year lease Opportunity cost of square feet of the land per day	$\text{Rs.}1101.91 \times 5300 / (30 \times 365)$
	Rs.553.34
Total number of admissions per year (2019)	69,753
Average number of inward patients per day	$69,753/365 = 191$
Per patient per day cost of the land	$\text{Rs.}553.34/191$
	Rs.2.90

Cost estimation of the building

The current construction cost was obtained from the technical officer (TO) at the Pradesheeya sabha

Description	Amount
Cost of building one square feet	Rs.4500.00
Total floor area of four medical wards	5300
Cost of the building of four medical wards	$\text{Rs.}4500.00 \times 5300$
	Rs.23,850,000.00
Assuming a 30 years life span of the building - Cost per day	$\text{Rs.}23,850,000.00 / (30 \times 365)$
	Rs.2178.08
Average number of inward patients per day	191
Per patient per day cost of the building	$\text{Rs.}2178.08/191$
	Rs.11.40

Allocation of the cost of meal and tea

Directly obtained from the relevant clerk during the last six-month period and average cost per month was calculated.

Description	Amount
Total cost of meals and tea incurred by the hospital per month	Rs.2,075,556.00
Total cost of meals and tea incurred by the hospital per day	Rs.2,075,556.00/30
	Rs.69,185.20
60% of the total meal and tea consumed by patients in a day (apportion was decided by the expert committee)	Rs.69,185.20X60/100 = Rs.48,429.64
Average number of inward patients per day	191
Per patient per day cost for meals and tea	Rs.48,429.64/191
	Rs.253.56

Utility cost - telephone facilities

Directly obtained from the relevant clerk during the last six-month period and average cost per month was calculated.

Description	Amount
Total cost of general telephone facilities incurred by the DGH Monaragala for a month	Rs.67,020.00/month
Per day cost for the telephone facilities for patients	Rs.67,020.00/30
	Rs.2234.00
Average 75% would be for the patient management requirement (apportion was decided by the expert committee)	Rs.2234.00 X 75/100
	Rs.1675.50
Average number of inward patients per day	191
Per patient per day cost for the telephone facility	Rs.1675.50/191
	Rs. 8.77

Utility cost - electricity

Directly obtained from the relevant clerk during the last six-month period and average cost per month was calculated.

Description	Amount
Total cost of electricity incurred by the DGH Monaragala for a month	Rs.1,699,302.85/month
Per day cost for the electricity for patients	Rs.1,699,302.85/30
	Rs.56643.42
Average 20% would be for the inward patient management requirement (apportion was decided by the expert committee)	Rs.56643.42 X 20/100
	Rs.11328.68
Average number of inward patients per day	191
Per patient per day cost for the electricity	Rs.11328.68/191
	Rs.59.31

Utility cost - water

Directly obtained from the relevant clerk during the last six-month period and average cost per month was calculated.

Description	Amount
Total cost of water incurred by the DGH Monaragala for a month	Rs.100,278.00/month
Per day cost for water facilities for patients	Rs.100,278.00/30
	Rs.3342.60
Average 20% would be for the inward patient management requirement (apportion was decided by the expert committee)	Rs.3342.60 X 20/100
	Rs.668.52
Average number of inward patients per day	191
Per patient per day cost for water	Rs.668.52/191
	Rs.3.50

Allocation of the cost of cleaning facilities

Directly obtained from the relevant clerk during the last six-month period and average cost per month was calculated.

Description	Amount
Total cost of cleaning facility incurred by the DGH Monaragala for a month	Rs.4,190,456.00/month
Per day cost for cleaning facilities for patients	Rs.4,190,456.00/30
	Rs.139,681.86
Average 40% would be for the inward patient management requirement (apportion was decided by the expert committee)	Rs.139,681.86 X 40/100
	Rs.55,872.40
Average number of inward patients per day	191
Per patient cost for a day	Rs.55,872.40/191
	Rs.292.52

Allocation of the cost of laundry facility

Directly obtained from the relevant clerk during the last six-month period and average cost per month was calculated.

Description	Amount
Total cost of laundry facility incurred by the DGH Monaragala for a month	Rs.418,540.00/month
Per day cost for laundry facilities for patients	Rs.418,540.00/30
	Rs.13951.33
Average 30% would be for the inward patient management requirement (apportion was decided by the expert committee)	Rs.13951.33 X 30/100
	Rs.4185.40
Average number of inward patients per day	191
Per patient cost for a day	Rs.4185.40/191
	Rs.21.91

Allocation of the cost of security facility

Directly obtained from the relevant clerk during the last six-month period and average cost per month was calculated.

Description	Amount
Total cost of security facility incurred by the DGH Monaragala for a month	Rs.1,786,192.00/month
Per day cost for security facilities for patients	Rs.1,786,192.00/30
	Rs.59,539.73
Average 50% would be for the inward patient management requirement (apportion was decided by the expert committee)	Rs.59,539.73 X 50/100
	Rs.29769.86
Average number of inward patients per day	191
Per patient cost for a day	Rs.29769.86/191
	Rs.155.86

Estimation of the staff cost of the ward

Directly obtained from the relevant clerk during the last six-month period, apportions finalized at the expert committee and average cost per month was calculated apportion of cost of time was decided by the expert committee.

Description	Amount
Cost of consultant's time	
Total gross salary of the consultant in the ward per month	Rs.7,471,263.40/29 consultants
Number of consultants in Medical wards	02
Total cost of all consultants in Medical ward	Rs.257,629.77 X 02 = Rs.515,259.54
Consultants involved in services at the ward, ICU and clinic proportion time allocation for each month would be as follows: ward 45%, clinic 45%, ICU 10% (Through communication with the consultant VP and apportion was decided by the expert committee)	Rs. 515,259.54 X 45/100
According to the time allocation reported by consultant and ward staff – cost of consultant time for the ward for the month	Rs.231,866.80
Usually involved about 24 days per month	Rs.231,866.80/24 = Rs.9661.11
Average number of patients seen by a consultant per day in a Medical ward (Record room statistics)	52
Cost of consultant per day, per patient	Rs.9661.11/52 = Rs.185.80
Cost of time of Intern Medical Officers	
Gross salary of the intern medical officer per month	Rs.45,000.00

Number of intern medical officers in Medical ward	08
Total cost of all intern medical officers	Rs.45,000.00 X 08
	Rs.360,000.00
Average of 90% of their time would be spent on inpatient care for a month (HOs work throughout the month)	Rs.360,000.00 X 90/100 = Rs.324,000.00
Average number of inpatients seen by an intern medical officer per day in a Medical ward (Record room statistics)	52
Cost of time of intern medical officers per day per patient	Rs.324,000.00/(30X52) = Rs.207.69
Cost of time of Medical Officers (MOs)	
Total cost of all MOs	Rs.16,508,819.93/94 MOs
Gross salary of one MO	Rs.175,625.74
Number of MOs in Medical ward	05
Total cost of all MOs in Medical ward	Rs.175,625.74 X 05 =Rs.878,128.70
Average of 50% of their time would be spent on inpatient care for a month(apportion was decided by the expert committee)	Rs.878,128.70X50/100 = Rs.439,064.35
Average number of inpatients seen by a SHO per day in a Medical ward (Record room statistics)	52
Usually involved about 24 days per month	Rs. 439,064.35/(24X52)
Cost of time of medical officers per day per patient	Rs.351.81
Cost of Nursing Officers time	
Total cost of all Nursing Officers (NOs)	Rs.23,026,573.92/287 NOs
Gross salary of one NO	Rs.80,231.96
Number of NOs in Medical ward	18
Total cost of all NOs in Medical ward	Rs.80,231.96 X 18
100% of their time would be spent on inpatient care for a month	Rs.1,444,175.28
Average number of inpatients per day in a Medical ward (Record room statistics)	52
Cost of time of Nursing Officers per day per patient	Rs.1,444,175.28/(30X52)
	Rs.925.75
Cost of Attendants	
Total cost of gross salaries of all Attendants	Rs.3,876,425.90/68 Attendants
Gross salary of one Attendant	Rs.57006.26
Number of Attendants in Medical ward	28
Total cost of all Attendants in Medical ward	Rs.57006.26 X 28
100% of their time would be spent on inpatient care for a month	Rs.1,596,168.00
Average number of inpatients per day in a Medical ward (Record room statistics)	52
Cost of time of attendants per day per patient	Rs.1,596,168.00/(30X52)

	Rs.1,023.00
Cost of Laborers	
Total cost of gross salaries of all laborers	Rs.5,269,086.63/122 laborers
Gross salary of one laborer	Rs.43,189.23
Number of laborers in Medical ward	24
Total cost of all Attendants in Medical ward	Rs.43,189.23 X 24 = Rs.1036541.52
Average number of inpatients per day in a Medical ward (Record room statistics)	52
100% of their time would be spent on inpatient care for a month	Rs.1036541.52/(30X52)
Cost of time of laborers per day per patient	Rs.664.44

Cost estimation of ward equipment In 4 medical wards

Directly obtained from the Bio Medical Engineering Section of the Ministry of Health. Per day cost was calculated according to the following formula

Per day cost = Unit price (Rs.) x Number in the medical wards / {Life span of the equipment x 365 x Average number of inward patients per day in a Medical ward (52)}

Equipment	Life span of the equipment	Number in the ward	Unit price (Rs.)	Per day cost (Rs.)
Blood pressure apparatus	03	10	6500.00	1.14
Stethoscope	03	04	10,000.00	0.70
Nebulizers	03	10	25,000.00	4.39
X ray illuminators	05	04	30,000.00	1.26
Oxygen regulators	03	14	10,174.00	2.50
Ambu bags	03	10	6,000.00	1.05
Multi monitors	05	08	1,000,000.00	84.29
Glucometers	02	04	9960.00	1.04
Thermometers	01	16	100.00	0.08
Emergency lamps	03	12	3600.00	0.75
Laryngoscope	03	07	51,182.00	6.29
Pulse oxymeters	03	03	350,000.00	18.44
Sucker machines	03	07	300,000.00	36.88
Infusion pumps	03	09	220,000.00	34.77
Total				193.58

Cost estimation of Electrical equipment

Directly obtained from the Bio Medical Engineering Section of the Ministry of Health. Per day cost was calculated according to the following formula

Per day cost = Unit price (Rs.) x Number in the medical wards / {Life span of the equipment x 365 x Average number of inward patients per day in a Medical ward (52)}

Equipment	Life span of the equipment	Number in the ward	Unit price (Rs.)	Per day cost (Rs.)
Celling fans	05	32	16,800.00	5.66
Televisions	05	03	110,000.00	3.47
Refrigerators	10	04	150,000.00	3.16
Electric kettles	03	04	8600.00	0.60
Lights – tube lights	02	80	900.00	1.90
Electric boiler	05	04	47,400.00	1.99
Total				16.78

Cost estimation of other equipment

Costs were obtained from the purchasing division of the Ministry of Health and the purchasing division of DGH Monaragala. Per day cost was calculated according to the following formula.

Per day cost = Unit price (Rs.) x Number in the medical wards / {Life span of the equipment x 365 x Average number of inward patients per day in a Medical ward (52)}

Equipment	Life span of the equipment	Number in the ward	Unit price (Rs.)	Per day cost (Rs.)
Plastic buckets	01	18	420.00	0.40
Waste bins	01	12	1300.00	0.82
Sterilizers	05	04	27,000.00	1.13
Water filters	05	04	8000.00	0.34
Total				2.69

Cost estimation of Furniture

Costs were obtained from the purchasing division of the Ministry of Health and the purchasing division of DGH Monaragala. Per day cost was calculated according to the following formula.

Per day cost = Unit price (Rs.) x Number in the medical wards / {Life span of the equipment x 365 x Average number of inward patients per day in a Medical ward (52)}

Equipment	Life span of the equipment	Number in the ward	Unit price (Rs.)	Per day cost (Rs.)
Admission bed	20	04	19,400.00	0.20
Patient bed	20	132	19,400.00	6.75
Mattresses	10	132	9,400.00	6.54
Air mattresses	10	12	11,000.00	0.70
Water mattresses	10	08	8,000.00	0.34
Pillows	05	132	750.00	1.04
Bed tables	20	132	13,772.00	4.80
Drug trolleys	10	04	30,000.00	0.63
Injection trolleys	10	04	32,500.00	0.68
Admission table	20	04	17,000.00	0.18
Office tables	20	08	60,000.00	1.26
Doctor chairs	05	08	17,600.00	1.48
Cushion chairs	05	06	9,000.00	0.57
Plastic chairs	02	70	2,520.00	4.64
Wheel chairs	10	12	18500.00	1.17
Drug cupboards	20	15	36,000.00	1.42
Wall clocks	02	04	4000.00	0.42
IV stands	05	42	13,000.00	5.75
Total				38.57

Cost estimation of ward linen

Costs were obtained from the purchasing division of the Ministry of Health and the purchasing division of DGH Monaragala. Per day cost was calculated according to the following formula.

Per day cost = Unit price (Rs.) x Number in the medical wards / {Life span of the equipment x 365 x Average number of inward patients per day in a Medical ward (52)}

Type of linen	Life span	Number in the ward	Unit price (Rs.)	Per day cost (Rs.)
Bed sheets	01	200	900.00	9.48
Mackintosh	01	50	400.00	1.05
Screen curtains	02	09	17,400.00	4.12
Hand towels	01	85	350.00	1.56
Mosquito nets	02	132	750.00	2.60
Total				18.81

Summary of the total cost of a patient per day

Cost item	Per day cost (Rs.)	Total per day Cost (Rs.)
Cost of the land	2.90	
Cost of the building	11.40	
Cost for meals and tea	253.56	
Cost of the telephone facility	8.77	
Cost of the electricity	59.31	
Cost of the water	3.50	
Cost of cleaning facility	292.52	
Cost of laundry facility	21.91	
Cost of security facility	155.86	
Sub total		809.73
Staff cost of inward services		
Cost of time of consultant	185.80	
Cost of time of intern medical officers	207.69	
Cost of time of medical officers	351.81	
Cost of time of nursing officers	925.75	
Cost of time of attendants	1023.00	
Cost of time of laborers	664.44	
Total cost of inward services		3358.49
Cost of ward equipment/linen		
Cost estimation of ward equipment	193.58	
Cost estimation of Electrical equipment	16.78	
Cost estimation of other equipment	2.69	
Cost estimation of Furniture	38.57	
Cost estimation of ward linen	18.81	
Sub total		270.43
Total cost of a patient per day		4438.65

2. Cost estimation of a biochemistry lab

Cost estimation of a land

The current cost of land in Monaragala hospital was obtained from the Pradesheeya sabha and cost of lands in adjacent areas was taken for comparison and to calculate an average value.

Description	Amount
Cost of a perch in the Monaragala Town area	Rs.300,000.00
1 Perch = 272.25 square feet	
Cost of 1 square feet	Rs.300,000.00/272.25 = Rs.1101.91
Total square feet in the biochemistry lab	480
Assumption – possibility of giving the land on a 30-year lease	
Cost of the land per day	Rs.1101.91 X 480/(365X30)
	Rs.48.30
Number of all biochemical tests (SCr/SE/LFT/UFR) done in a day (taken from statistics from the Biochemical lab)	LFT= 70/ SCr=120/ SE=65/ UFR=70 (70+120+65+70) =325
Cost of the land for one test	Rs.48.30/325
	0.15

Cost estimation of the building

The current construction cost was obtained from the technical officer (TO) at the Pradesheeya sabha

Description	Amount
Cost of building a square feet	Rs.4500.00
Total floor area of the biochemistry lab	480
Cost of the building of the biochemistry lab	Rs.4500.00 X 480
	Rs.2,160,000.00
Assuming a 30 years lifespan for the building	
Cost per day for the building	Rs.2,160,000.00/(365X30)
	Rs.197.26
Number of all biochemical tests (SCr/SE/LFT/UFR) done in a day	325
Cost of the building for one test	Rs.197.26/325
	0.60

Cost estimation for the machine

Directly obtained from the Bio Medical Engineering Section of the Ministry of Health.

Description	Amount
All biochemical tests are done in one machine	
Cost of 1 Bio chemistry analyzer	Rs.6,000,000.00
Number of Bio chemistry analyzers in the department	2
Cost of all Bio chemistry analyzers	Rs.12,000,000.00
Assuming Bio chemistry analyzer has 30 years half life	
Cost one machine per day	$\text{Rs.12,000,000.00}/(365 \times 30) = \text{Rs.1095.89}$
Number of tests done in department per day	325
Cost of 1 biochemical test	$\text{Rs.1095.89}/325$
	Rs.3.37

Cost of reagents and other consumables

Costs were obtained from the Medical Supplies Division.

Description	Amount
Serum Electrolytes (SE)	
One pack of reagents for SE	Rs.50,000.00
Number of tests (SE) that can be done by one pack	3000
Cost of reagents for one SE	$\text{Rs.50000.00}/3000$
	Rs.16.66
Cost of electrodes needed for SE	
Reference electrodes	Rs.60,000.00
Electrode housing	Rs.60,000.00
Number of months can be used	06
Cost of electrode for one SE	$\text{Rs.120,000.00}/(65 \times 30)$
	Rs.61.54
Cost of consumables	
Washing solutions (1 month)	15,000.00
Cost of one test	$15,000.00/(65 \times 30)$
	Rs.7.69
Conditioners (1 month)	Rs.12,000.00
	Rs.6.15
Total cost for one SE for reagents and consumables	$16.66+61.54+7.69+6.15 = \text{Rs.92.04}$

Description	Amount
Serum Creatinine (SCr)	
One pack of reagents for SCr	Rs.52,000.00
Number of tests (SCr) that can be done by one pack	1500
Cost of reagents for one SCr	Rs.52,000.00/1500
	Rs.34.66
Cost of calibrator and quality controller	
Cost of calibrator	Rs.18,000.00
Number of months that can be used	01
Number of SCr tests done in a month	120 X 30 = 3600
Cost of one SE test for calibrator	Rs.18,000.00/3600
	Rs.5.00
Cost of quality controller	Rs. 65,000.00
Number of months that can be used	01
Number of SCr tests done in a month	5000
Cost of one SE test for quality controller	Rs. 65,000.00/5000
	Rs.13.00
Cost of consumables for SCr	
Cost of consumable	Rs.13,500.00
Number of tests can be used	1000
Cost of one test for SCr	Rs.13,500.00/1000
	Rs.13.50
Total cost for one SCr for reagents and consumables	34.66+5.00+13.00+13.50 = 66.16

Cost of Liver function tests (SGPT/Bilirubin/Alkaline Phosphatase)

Description	Amount
One pack of reagents for LFT	
SGPT (5000 tests)	Rs.25,875.00
Bilirubin (6000 tests)	Rs.31,500.00
Alkaline Phosphatase (6000)	Rs.27,000.00
Cost of reagents for one LFT	(25,875.00/5000) +(31,500.00/6000) +(27,000/6000)
	5.17+5.25+4.50 = Rs.14.92
Cost of calibrator and quality controller	
Cost of calibrator	Rs.18,000.00
Number of months that can be used	01
Number of LFT tests done in a month	70X30=2100
Cost of one test for calibrator	Rs.18,000.00/2100= Rs.8.57
Cost of quality controller	69,000.00
Number of months that can be used	01
Number of LFT tests done in a month	70X30=2100
Cost of one test for quality controller	Rs.69,000.00/2100= Rs.32.85

Cost of consumables for LFT	Rs.15,000.00
Cost of consumable	1500
Number of tests can be used	Rs.15,000.00/1500
Cost of one test of LFT	Rs.10.00
Total cost for one LFT for reagents and consumables	Rs.66.34

Cost of UFR

Description	Amount
One pack of reagents for UFR	
Benedict solution 500ml (250,000 tests)	Rs.2000.00
Salicylic Acid 100ml (300 tests)	Rs.750.00
Cost of reagents for one UFR	$(2000/250,000) + (750/300) = \text{Rs.2.51}$
Deposits checked manually by MLTs from a microscope (Olympus/ 20-year life span/70 UFR per day)	$\text{Rs.350,000.00}/(20 \times 356 \times 70) = \text{Rs.0.68}$

Allocation of the cost of electricity

Directly obtained from the relevant clerk during the last six-month period and average cost per month was calculated.

Description	Amount
Total cost of electricity incurred by the DGH Monaragala for a month	Rs.1,699,302.85/month
Average 1% would be for the Biochemistry laboratory functions (apportion was decided by the expert committee)	$\text{Rs.1,699,302.85} \times 1/100$
	Rs.16993.03
Number of all biochemical tests (SCr/SE/LFT/UFR) done in a day	325
Average tests done in a month (SCr/SE/LFT/UFR)	$325 \times 30 = 9750$
Cost of 1 test	$\text{Rs.16993.03}/9750$
	Rs.1.74

Estimation of the staff cost of the biochemistry lab

Directly obtained from the relevant clerk during the last six-month period, apportionments finalized at the expert committee and average cost per month was calculated and apportion of time was decided by the expert committee.

Description	Amount
Cost of consultant's time	
Total gross salary of the consultant per month	Rs.257,629.77
Consultant Pathologists involved in services at the Bio chemistry lab for a month would be as follows: Bio chemistry – 10%, Others 90%	
According to the time allocation reported by consultant and ward staff – Cost of consultant time for the ward for month	Rs.257,629.77 X 10/100
	Rs.25,762.97
Usually involve duties about 24 days per month	
Cost of consultant per day	Rs.25,762.97/24
	Rs.Rs.1073.45
Number of tests done a day	325
Cost per one test	Rs.Rs.1073.45/325
	Rs.3.30
Cost of time of Medical Officers	
Total cost of Medical Officers	Rs.175,625.74 X 2 (MOs) = Rs.351,251.48
Average of 10% of their time would be sent on Biochemistry tests	Rs.351,251.48 X 10/100 = Rs.35,125.14
Cost of time of medical officers per day	Rs.35,125.14/24 = Rs.1463.54
Cost per one test	Rs.1463.54/325
	Rs.4.50
Cost of MLT time	Rs.1,728,229.07/17 (MLTs)
Total cost of MLTs (04)	Rs.101,660.53 X 4 = Rs.406,642.12
40% of their time would be spent on above tests for a month	Rs.406,642.12 X 40/100 = Rs.162,656.84
Cost of time of MLTs per day (26 days work)	Rs.162,656.84/26 = Rs.6,256.03
Cost per one test	Rs.6,256.03/325
	Rs.19.24
Cost of laborers	
Total cost of gross salaries of all laborers (03 permanent)	Rs.43,189.23 X 3 = Rs.129,567.69
Average of 40% of their time would be spent on inpatient care for a month	Rs.129,567.69 X 40/100 = Rs.51,827.07
Cost of time of laborers per day (26 days)	Rs.51,827.07/26 = Rs.1,993.34
Cost per one test	Rs.1,993.34/325
	Rs.6.13

Cost of estimation of laboratory equipment

Costs were obtained from the purchasing division of the Ministry of Health and the purchasing division of DGH Monaragala. Per day cost was calculated according to the following formula.

Per day cost = Unit price (Rs.) x Number in the medical wards / {Life span of the equipment x 365 x Average number of inward patients per day (191)}

Equipment	Lifespan of the equipment	Number	Unit price (Rs.)	Per day cost (Rs.)
Refrigerator	10	03	140,000.00	0.35
Air conditioner	10	02	85,000.00	0.14
Computers	03	02	120,000.00	0.67
Light – tube lights	02	08	900.00	0.03
Total				1.19

Cost of estimation of furniture and other equipment

Costs were obtained from the purchasing division of the Ministry of Health and the purchasing division of DGH Monaragala. Per day cost was calculated according to the following formula.

Per day cost = Unit price (Rs.) x Number in the medical wards / {Life span of the equipment x 365 x Average number of inward patients per day (191)}

Equipment	Lifespan of the equipment	Number	Unit price (Rs.)	Per day cost (Rs.)
Office tables - Wooden	20	02	50,000.00	0.04
Office tables - steel	20	01	67,500.00	0.02
Cushion chairs	05	04	9,000.00	0.06
Wooden chairs	10	02	10,000.00	0.02
Plastic chairs	02	10	2520.00	0.10
Steel cupboards	20	02	31,100.00	0.03
Computer tables	10	02	19,200.00	0.03
Total				0.3

Summary of the total cost of a SE in a laboratory setting

Cost item	Per day cost (Rs.)	Total per day cost (Rs.)
Cost of the land	0.15	
Cost of the building	0.60	
Cost for the analyzer	3.37	
Cost of reagents and consumables	92.04	
Cost of the electricity	1.74	
Sub total		97.90
Staff cost of inward services		
Cost of time of consultant	3.30	
Cost of time of medical officers	4.50	
Cost of time of MLTs	19.24	
Cost of time of laborers	6.13	
Total staff time cost		33.17
Cost of ward equipment		
Electrical equipment	1.19	
Furniture	0.30	
Sub total		1.49
Grand total		130.82

Summary of the total cost of a SCr in a laboratory setting

Cost item	Per day cost (Rs.)	Total per day cost (Rs.)
Cost of the land	0.15	
Cost of the building	0.60	
Cost for the analyzer	3.37	
Cost of reagents and consumables	66.16	
Cost of the electricity	1.74	
Sub total		72.02
Staff cost of inward services		
Cost of time of consultant	3.30	
Cost of time of medical officers	4.50	
Cost of time of MLTs	19.24	
Cost of time of laborers	6.13	
Total staff time cost		33.17
Cost of ward equipment		
Electrical equipment	1.19	
Furniture	0.30	
Sub total		1.49
Grand total		106.68

Summary of the total cost of a LFT in a laboratory setting

Cost item	Per day cost (Rs.)	Total per day cost (Rs.)
Cost of the land	0.15	
Cost of the building	0.60	
Cost for the analyzer	3.37	
Cost of reagents and consumables	66.34	
Cost of the electricity	1.74	
Sub total		72.20
Staff cost of inward services		
Cost of time of consultant	3.30	
Cost of time of medical officers	4.50	
Cost of time of MLTs	19.24	
Cost of time of laborers	6.13	
Total staff time cost		33.17
Cost of ward equipment		
Electrical equipment	1.19	
Furniture	0.30	
Sub total		1.49
Grand total		106.86

Summary of the total cost of a UFR in a laboratory setting

Cost item	Per day cost (Rs.)	Total per day cost (rs.)
Cost of the land	0.15	
Cost of the building	0.60	
Cost for the analyzer	0.68	
Cost of reagents and consumables	2.51	
Cost of the electricity	1.74	
Sub total		5.68
Staff cost of inward services		
Cost of time of consultant	3.30	
Cost of time of medical officers	4.50	
Cost of time of MLTs	19.24	
Cost of time of laborers	6.13	
Total staff time cost		33.17
Cost of ward equipment		
Electrical equipment	1.19	
Furniture	0.30	
Sub total		1.49
Grand total		40.34

3. Cost estimation of a Haematology lab

Cost estimation of one FBC

Cost estimation of the land; the current cost of land in Monaragala hospital was obtained from the Pradesheeya sabha and cost of lands in adjacent areas was taken for comparison and to calculate an average value.

Description	Amount
Cost of a perch in the Monaragala Town area	Rs.300,000.00
1 Perch	272.25 sqft
Cost of 1 square feet	Rs.1101.91
Total square feet in the ward	320
Assumption – possibility of giving the land on a 30-year lease	
Opportunity cost square feet on the land per day	$Rs.1101.91 \times 320 / (30 \times 365)$
	Rs.32.20
Number of FBCs done in a day (Statistics from Haematology lab)	450
Cost of the land for one test	$Rs.32.20 / 450$
	Rs.0.07

Cost estimation of the building

The current construction cost was obtained from the technical officer (TO) at the Pradesheeya sabha

Description	Amount
Cost of building a square feet	Rs.4500.00
Total floor area of the room	320
Cost of the building	$Rs.4500.00 \times 320$
	Rs.1,440,000.00
Assuming a 30 years lifespan	
Cost per day	$Rs. 1,440,000.00 / (30 \times 365)$
	Rs.131.51
Number of FBCs done in a day	450
Cost of the building for one test (FBC)	$Rs.131.51 / 450$
	Rs.0.30

Cost estimation of the machine

Directly obtained from the Bio Medical Engineering Section of the Ministry of Health.

Description	Amount
All Full Blood Counts are done in one machine	
Cost of the haematology analyzer	Rs.4,000,000.00 (Beckman LH 500)
Number of haematology analyzers in the department	01
Cost of all haematology analyzers	Rs.4,000,000.00
Assuming haematology analyzer has 10 years half life	
Cost one machine per day	Rs.4,000,000.00/(10X365)
	Rs.1095.90
Number of tests (FBC) done in a day	450
Cost of 1 test	Rs.1095.00/450
	Rs.2.43

Cost of reagents and other consumables

The costs were obtained from the Medical Supplies Division.

Description	Amount
Full Blood Count	
Packs of diluent for FBC per month	18
Number of FBCs done in a day	450
Number of tests (FBC) done in a month	$450 \times 30 = 13500$
Cost of one pack of diluents	Rs.9616.00
Cost of reagents for one FBC	$\text{Rs.}9616.00 \times 18/13500$
	Rs.12.82
Cost of cleanser	
Cost of one cleanser pack	Rs.1794.00
Number of cleanser packs per month	03
Cost of three cleanser packs	Rs.5370.00
Number of FBCs done in a day	450
Number of tests (FBC) done in a month	$450 \times 30 = 13500$
Cost of cleanser packs per one FBC	$\text{Rs.}5370.00/13500$
	Rs.0.40
Lyse	
Number of Lyse per month	15
Cost of one pack of lyse (diluent)	Rs.1931.00
Cost of packs of diluents per month	$\text{Rs.}1931.00 \times 15 = \text{Rs.}28965.00$
Number of FBCs done in a day	450
Number of tests (FBC) done in a month	$450 \times 30 = 13500$
Cost of Lyse for one FBC	$\text{Rs.}28965.00/13500$
	Rs.2.15
Total cost for one FBC for reagents and consumables	$\text{Rs.}12.82 + \text{Rs.}0.40 + \text{Rs.}2.15 = \text{Rs.}15.37$

Utility cost - Electricity

Directly obtained from the relevant clerk during the last six-month period and average cost per month was calculated.

Description	Amount
Total cost of electricity incurred by the DGH Monaragala for a month	Rs.1,699,302.85/month
Average 1% would be for the Biochemistry laboratory functions (apportion was decided by the expert committee)	Rs.1,699,302.85 X 1/100
	Rs.Rs.16993.03
Number of FBCs done in a day	450
Average tests done in a month	450 X 30 = 13500
Cost of 1 test	Rs.16993.03/13500
	Rs.1.25

Estimation of a staff cost of the haematology lab

Directly obtained from the relevant clerk during the last six-month period, apportions finalized at the expert committee and average cost per month was calculated and apportion of time was decided by the expert committee.

Description	Amount
Cost of consultant's time	
Total gross salary of the Consultant Haematologist per month	Rs.257,629.77
Consultant Haematologist involved in services at the Haematology lab for a month would be as follows: Haematology – 5%, Others 95% (apportion was decided by the expert committee)	Rs.257,629.77 X 5/100
According to the time allocation reported by Haematologist – Cost of Haematologist time for the laboratory for month	Rs.12881.48
Usually involve duties about 24 days per month	Rs.12881.48/24
Cost of Haematologist per day	Rs.536.72
Number of tests done a day	450
Cost per 1 test	Rs.536.72/450= Rs.1.19
Cost of time of medical officers	Rs.175,625.74
Total cost of medical officers (2 MOs)	Rs.175,625.74X2= Rs.351,251.48

Average of 1% of their time would be sent on tests (FBC)	$\text{Rs.}351,251.48 \times 1/100 = \text{Rs.}3,512.51$
Cost of time of medical officers per day	$\text{Rs.}3,512.51/24 = \text{Rs.}146.35$
Number of FBCs done in a day	450
Cost per one FBC	$\text{Rs.}146.35/450 = \text{Rs.}0.32$
Cost of MLT time	$\text{Rs.}101,660.53$
Total cost of MLTs (4 MLTs)	$\text{Rs.}101,660.53 \times 4 = \text{Rs.}406,642.12$
80% of their time would be spent on above tests for a month	$\text{Rs.}406,642.12 \times 80/100 = \text{Rs.}325,313.70$
Cost of time of MLTs per day (26 days)	$\text{Rs.}325,313.70/26 = \text{Rs.}12,512.06$
Number of FBCs done in a day	450
Cost per one test	$\text{Rs.}12,512.06/450 = \text{Rs.}27.80$
Cost of laborers	$\text{Rs.}43,189.23$
Total cost of gross salaries of all laborers (03)	$\text{Rs.}43,189.23 \times 3 = \text{Rs.}129,567.69$
Average of 80% of their time would be spent on inpatient care for a month	$\text{Rs.}129,567.69 \times 80/100 = \text{Rs.}103,654.15$
Cost of time of laborers per day (26days)	$\text{Rs.}103,654.15/26 = \text{Rs.}3986.70$
Number of FBCs done in a day	450
Cost per one test	$\text{Rs.}3986.70/450 = \text{Rs.}8.86$

Cost of estimation of laboratory equipment

Costs were obtained from the purchasing division of the Ministry of Health and the purchasing division of DGH Monaragala. Per day cost was calculated according to the following formula.

Per day cost = Unit price (Rs.) x Number in the medical wards / {Life span of the equipment x 365 x Average number of FBCs done per day (450)}

Equipment	Lifespan	Number	Unit price (Rs.)	Per day cost (Rs.)
Refrigerator (LG)	10	01	140,000.00	0.08
Air conditioner	10	01	85,000.00	0.05
Computers	03	03	120,000.00	0.73
Light – tube lights	02	03	900.00	0.01
Total				0.87

Cost of Furniture

Costs were obtained from the purchasing division of the Ministry of Health and the purchasing division of DGH Monaragala. Per day cost was calculated according to the following formula.

Per day cost = Unit price (Rs.) x Number in the medical wards / {Life span of the equipment x 365 x Average number of FBCs done per day (450)}

Equipment	Lifespan	Number	Unit price (Rs.)	Per day cost (Rs.)
Office tables - Wooden	20	03	50,000.00	0.04
Cushion chairs	05	03	9,000.00	0.03
Wooden chairs	10	03	10,000.00	0.02
Plastic chairs	02	06	2,520.00	0.05
Steel cupboards	20	01	31,100.00	0.01
Computer tables	10	01	19,200.00	0.01
Total				0.16

Summary of the total cost of one FBC in a laboratory setting

Cost item	Per day cost (Rs.)	Total per day cost (Rs.)
Cost of the land	0.07	
Cost of the building	0.30	
Cost for the analyzer	2.43	
Cost of reagents and consumables	15.37	
Cost of the electricity	1.25	
Sub total		19.42
Staff cost of inward services		
Cost of time of consultant	1.19	
Cost of time of medical officers	0.32	
Cost of time of MLTs	27.80	
Cost of time of laborers	8.86	
Total staff time cost		38.17
Cost of laboratory (Haematology) equipment		
Electrical equipment	0.87	
Furniture	1.16	
Sub total		2.03
Grand total		59.62

4. Cost estimation of USS

Cost estimation of the land

The current cost of land in Monaragala hospital was obtained from the Pradesheeya sabha and cost of lands in adjacent areas was taken for comparison and to calculate an average value.

Description	Amount
Cost of a perch in the Monaragala Town area	Rs.300,000.00
1 Perch	272.25 sqft
Cost of 1 square feet	Rs.1101.91
Total square feet in the USS room	660
Assumption – possibility of giving the land on a 30-year lease	
Opportunity cost square feet on the land per day	Rs. Rs.1101.91 X 660/(30X365)
	Rs.66.41
Number of USS done in a day (Statistics from Scanning Unit)	60
Cost of the land for one USS	Rs.66.41/60
	Rs.1.12

Cost estimation of the building

The current construction cost was obtained from the technical officer (TO) at the Pradesheeya sabha

Description	Amount
Cost of building a square feet	Rs.4500.00
Total floor area of the room	660
Cost of the building	Rs.4500.00 X 660
	Rs.2,970,000.00
Assuming a 30 years lifespan	
Cost per day	Rs.2,970,000.00/(30X365)
	Rs.271.23
Number of USS done in a day	60
Cost of one USS	Rs.271.23/60
	Rs.4.52

Cost estimation of the machine

Directly obtained from the Bio Medical Engineering Section of the Ministry of Health.

Description	Amount
Cost of one USS machine	Rs.5,500,000.00
Number of USS machines in the department	02
Cost of all USS machines	Rs.11,000,000.00
Assuming USS machine has 10 years half life	
Cost one USS machine per day	Rs.11,000,000.00/(365 X 10)
	Rs.3013.69
Number of USS done in a day	60
Cost of 1 USS test	Rs.3013.69/60
	Rs.50.23

Allocation of the cost of Electricity

Directly obtained from the relevant clerk during the last six-month period and average cost per month was calculated.

Description	Amount
Total cost of electricity incurred by the DGH Monaragala for a month	Rs.1,699,302.85/month
Average 2% would be for the USS room facilities (apportion was decided by the expert committee)	Rs.1,699,302.85 X 2/100
	Rs.33,986.06
Number of USS done in a day	60
Average USS done in a month	60 X 30 = 1800
Cost of 1 USS	Rs.33,986.06/1800
	Rs.17.34

Estimation of a staff cost of the ward

Directly obtained from the relevant clerk during the last six-month period, apportions finalized at the expert committee and average cost per month was calculated and apportion of time was decided by the expert committee.

Description	Amount
Cost of consultant's time	
Gross salary of the Consultant per month	Rs.257,629.77
Number of Consultant Radiologists	2
Total gross salary of the Consultants per month	Rs.257,629.77 X 2= Rs.515,259.54

Consultant Radiologists involved in services at the USS room and reporting CT for a month would be as follows: USS 70%, CT reporting 30%	Rs.515,259.54 X 70/100=Rs.360,681.68
According to the time allocation reported by Consultant and ward staff – Cost of Consultant time for the ward for month	
Usually involve duties about 24 days per month	Rs.360,681.68/24
Cost of Consultant per day	Rs.15,028.40
Number of USS reporting a day	60
Cost per 1 USS	Rs.250.47
Cost of time of medical officers	Rs.175,625.74
Total cost of medical officers (04)	Rs.175,625.74 X 4 =Rs.702,502.96
Average of 100% of their time would be sent on USS for a month	
Cost of time of medical officers per day	Rs.175625.74/30 =Rs.23,416.76
Number of USS reporting a day	60
Number of USS reporting a day by MOs	Rs.23,416.76/60
Cost per one USS	Rs.390.00
Cost of laborers	Rs.43,189.23
Total cost of gross salaries of all laborers (02)	Rs.43,189.23 X2 =Rs.86,378.46
Average of 100% of their time would be spent on inpatient care for a month	Rs.86,378.46/30 = Rs.2,879.28
Cost per one USS	Rs.2879.28/60 = Rs.47.99

Cost of estimation of ward equipment

Costs were obtained from the purchasing division of the Ministry of Health and the purchasing division of DGH Monaragala. Per day cost was calculated according to the following formula.

Per day cost = Unit price (Rs.) x Number in the medical wards / {Life span of the equipment x 365 x Average number of USSs done per day (60)}

Equipment	Lifespan	Number	Unit price (Rs.)	Per day cost (Rs.)
Air conditioner	10	04	85,000.00	1.55
Ceiling fans	05	02	5,800.00	0.10
Computers	03	03	120,000.00	5.48
Light – tube lights	02	08	900.00	0.16
Total				7.29

Cost of Furniture

Costs were obtained from the purchasing division of the Ministry of Health and the purchasing division of DGH Monaragala. Per day cost was calculated according to the following formula.

Per day cost = Unit price (Rs.) x Number in the medical wards / {Life span of the equipment x 365 x Average number of USSs done per day (60)}

Equipment	Life span of the Equipment	Number	Unit price (Rs.)	Per day cost (Rs.)
Admission bed	20	04	19,400.00	0.18
Mattresses	10	04	9,400.00	0.17
Pillows	03	04	750.00	0.04
Admission table	20	04	17,000.00	0.16
Office tables -wooden	20	02	60,000.00	0.27
Doctor chairs	05	06	17,600.00	0.96
Wooden chairs	10	06	10,200.00	0.28
Plastic chairs	02	06	2,520.00	0.34
Filling steel cupboards	20	04	31,100.00	0.28
Table lamp	02	02	3,500.00	0.15
Wall clocks	02	01	4,000.00	0.09
Computer tables	10	03	19,200.00	0.26
Total				3.18

Cost estimation of ward linen

Costs were obtained from the purchasing division of the Ministry of Health and the purchasing division of DGH Monaragala. Per day cost was calculated according to the following formula.

Per day cost = Unit price (Rs.) x Number in the medical wards / {Life span of the equipment x 365 x Average number of USSs done per day (60)}

Linen	Life span of the Equipment	Number	Unit price (Rs.)	Per day cost (Rs.)
Bed sheets	01	12	900.00	0.49
Mackintosh	01	07	400.00	0.12
Screen curtains	02	02	17,400.00	0.79
Hand towels	01	12	350.00	0.19
GS towels	02	25	360.00	0.20
Surgeon gowns	02	06	1,100.00	0.15
Over coats	02	06	1,200.00	0.16
Green gowns	02	10	500.00	0.11
Women jackets	02	14	450.00	0.14
Total				2.35

Summary of the total cost of an USS

Cost item	Per day cost (Rs.)	Total per day cost (Rs.)
Cost of the land	1.12	
Cost of the building	4.52	
Cost for USS machine	50.23	
Cost of the electricity	17.34	
Sub total		73.21
Staff cost of inward services		
Cost of time of consultant	250.47	
Cost of time of medical officers	390.00	
Cost of time of laborers	47.99	
Total staff time cost		688.46
Cost of ward equipment/linen		
Electrical equipment	7.29	
Furniture	3.18	
Ward linen	2.35	
Sub total		12.82
Grand total		774.49

5. Cost estimation of ECG

Cost estimation of the ECG machine

Directly obtained from the Bio Medical Engineering Section of the Ministry of Health.

Description	Amount
Cost of one ECG machine	Rs.500,000.00
Number of ECG machines in the department	02
Cost of all ECG machines	Rs.1,000,000.00
Assuming ECG machine has 10 years half life	
Cost one ECG machine per day	Rs.1,000,000.00/(365 X 10)
	Rs.273.97
Number of ECGs done in department PER day (Statistics from ECG Unit)	120
Cost of 1 ECG	Rs.273.97/120
	Rs.2.28

Cost of other consumables

The costs were obtained from the Medical Supplies Division.

Description	Amount
Cost of 1 gel bottle	Rs.550.00
Average number of ECGs done out of 1 gel bottle	60
Cost per 1 ECG	Rs.550.00/60
	Rs.9.20
Cost of 1 paper roll (20m)	Rs.120.00
Average number of ECGs done from 1 paper roll	20
Cost per 1 ECG	Rs.120.00/20
	Rs.6.00

Estimation of a staff cost for an ECG

Directly obtained from the relevant clerk during the last six-month period, apportions finalized at the expert committee and average cost per month was calculated.

Description	Amount
Cost of time of ECG recordists	
Total cost of ECG recordists (4)	Rs.346,551.84
Average of 100% of their time would be spent on ECG recording for a month	
Cost of time of radiographers per day (26 days)	Rs. 346,551.84/26 =Rs.13,328.92
Number of ECGs done per day	120
Cost per one ECG	Rs. 13,328.92/120
	Rs.111.07
Cost of Attendants	

Total cost of gross salaries of all Attendants (04)	Rs.3,876,425.90/68 Attendants
	Rs.57,006.26 X 04
100% of their time would be spent on inpatient care for a month	Rs.228,025.04
Cost of time of attendants per day per patient	Rs.228,025.04/(30X120)
	Rs.63.34

Utility cost - Electricity

Directly obtained from the relevant clerk during the last six-month period and average cost per month was calculated.

Description	Amount
Total cost of electricity incurred by the DGH Monaragala for a month	Rs.1,699,302.85/month
Average 0.25% would be for the ECG machine recharge (apportion was decided by the expert committee)	Rs.1,699,302.85 X 0.25/100
	Rs.4248.25
Number of ECGs done per day	120
Average number of ECGs done in a month	120 X 30 = 3600
Cost of 1 ECG	Rs.4248.25/3600
	Rs.1.20

Summary of the total cost of an ECG

Cost item	Per day cost (Rs.)	Total per day cost (Rs.)
Cost for ECG machine	2.28	
Cost of the electricity	1.20	
Sub total		3.48
Staff cost of inward services		
Cost of time of ECG recordists	111.07	
Cost of Attendants	63.34	
Total staff time cost		
		174.41
Cost of other equipment		
Gel bottles	9.20	
Paper rolls	6.00	
Sub total		
		15.20
Grand total		Rs.193.09

6. Cost estimation of an X - ray

Cost estimation of the land

The current cost of land in Monaragala hospital was obtained from the Pradesheeya sabha and cost of lands in adjacent areas was taken for comparison and to calculate an average value.

Description	Amount
Cost of a perch in the Monaragala Town area	Rs.300,000.00
1 Perch	272.25 sqft
Cost of 1 square feet	Rs.1101.91
Total square feet in the ward	710
Assumption – possibility of giving the land on a 30-year lease	
Opportunity cost square feet on the land per day	$Rs.1101.91 \times 710 / (365 \times 30)$
	Rs.71.45
Number of X-rays done in a day (Statistics from Radiology unit)	280
Cost of the land for one X-ray	$Rs.71.45 / 280$
	Rs.0.25

Cost estimation of the building

The current construction cost was obtained from the technical officer (TO) at the Pradesheeya sabha

Description	Amount
Cost of building a square foot in X-ray room with 6 lead doors	$Rs.4500.00 + (Rs.400,000 \times 6)$
Total floor area of the room	710
Cost of the building	$(Rs.4500.00 \times 710) + (Rs.400,000 \times 6)$
	$(Rs.3,195,000.00) + (Rs.2,400,000.00)$
	Rs.5,595,000.00
Assuming a 30 years lifespan	
Cost per day	$Rs.5,595,000.00 / (30 \times 365)$
	Rs.510.96
Number of X-rays done in a day	280
Cost of the building for one X-ray	$Rs.510.96 / 280$
	Rs.1.82

Cost estimation of the machine

Directly obtained from the Bio Medical Engineering Section of the Ministry of Health.

Description	Amount
Cost of one X-ray machine	Rs.6,000,000.00
Number of X-ray machines in the department	5
Cost of all X-ray machines	Rs.30,000,000.00
Assuming X-ray machine has 15 years half life	Rs.30,000,000.00/(15X365)
Cost one machine per day	Rs.5,479.45
Number of X-rays done in a day	280
Cost of 1 X-ray	Rs.5,479.45/280
	Rs.19.57

Cost estimation of the printer

Directly obtained from the Bio Medical Engineering Section of the Ministry of Health.

Description	Amount
Cost of one X-ray printer	Rs.1,000,000.00
Number of X-ray printers in the department	2
Cost of all X-ray printers	Rs.2,000,000.00
Assuming X-ray printers has 15 years half life	
Cost one printer per day	Rs.2,000,000.00/(15X365)
	Rs.365.30
Number of X-ray done in a day	280
Cost of 1 X-ray printer for 1 X-ray	Rs.365.30/280
	Rs.1.30

Cost estimation of the films

Costs were obtained from the Medical Supplies Division.

Cost of one X-ray film { 35X43(100pack) =32400.00/ 26X36(150pack) =33096.60/ 18X24(150pack) =17868.60}	(Rs.82.00X0.5) +(Rs.105.34X0.3) +(Rs.86.00X0.2) = Rs.41.00+Rs.31.60+Rs.17.20 = Rs.89.80
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Cost estimation of the cassettes

Costs were obtained from the Medical Supplies Division.

Cost of cassettes {Manual (18X24 –Rs.45,000.00) (24X30-Rs.45,000.00) (30X40-Rs.45,000.00) (35X43-60,000.00) (35X35)} {Digital 14X17-Rs.400,000.00) = Rs.865,000.00	
Life time for one cassette	5 years
Cost of cassette for one month	Rs.865,000.00/ (5X12)
	Rs.14416.66
Number of X-rays done in a day	280
Number of X-rays per one month	280 X 30 = 8400
Cost of cassette for one X-ray	Rs.14416.66/8400
	Rs.1.71

Cost estimation of X-ray process- Chemicals

Costs were obtained from the Medical Supplies Division.

Description	Amount
Fixer 1 ml	Rs.0.1
Number of X-rays from 20 L	750
Cost for I X-ray	0.1X20X1000/750
	Rs.2.66
Developer	0.20
Number of X-rays from 20 L	750
Cost for one X-ray	0.2X20X1000/750
	Rs.5.30

Utility cost - Electricity

Directly obtained from the relevant clerk during the last six-month period and average cost per month was calculated.

Description	Amount
Total cost of electricity incurred by the DGH Monaragala for a month	Rs.1,699,302.85/month
Average 2% would be for the X-ray room facilities (apportion was decided by the expert committee)	Rs.1,699,302.85 X 2/100
	Rs.33,986.06
Number of X-ray done in a day	280
Average X-rays done in a month	280 X 30 = 8400
Cost of 1 X-ray	Rs.33,986.06/8400
	Rs.4.05

Estimation of a staff cost of the ward

Directly obtained from the relevant clerk during the last six-month period, apportionments finalized at the expert committee and average cost per month was calculated and apportion of time was decided by the expert committee.

Description	Amount
Cost of consultant's time	
Gross salary of the Consultant Radiologist	Rs.257,629.77
Total gross salary of the Consultants per month (02)	Rs.257,629.77 X 2= Rs.515,259.54
Consultant Radiologists involved in services at the USS room and reporting CT for a month would be as follows: USS 70%, CT reporting 20%, X-ray reporting 10%	Rs.515,259.54 X 10/100=Rs.51,525.95
According to the time allocation reported by Consultant and ward staff – Cost of Consultant time for the ward for month	
Usually involve duties about 24 days per month	Rs.51,525.95/24
Cost of Consultant per day	Rs.2,146.91
Number of X-ray reporting a day	280
Cost per 1 X-ray	Rs.2,146.91/280 = Rs.7.66
Cost of time of radiographers	Rs.114,328.05
Total cost of radiographers (06)	Rs.685,968.33
Average of 100% of their time would be sent on X-ray for a month	
Cost of time of radiographers per day (26 days)	Rs.685,968.33/26 =Rs.26,383.40
Number of X-rays per day	280
Cost per one X-ray	Rs.26,383.40/280 = Rs.94.23
Cost of laborers	Rs.43,189.23
Total cost of gross salaries of all laborers (06)	Rs.43,189.23 X 6 =Rs.259,135.38
Average of 100% of their time would be spent on inpatient care for a month	Rs.259,135.38/30 =Rs.8,637.85
Cost per one X-ray	Rs.8,637.85/280 = Rs.30.85

Cost of estimation of equipment

Cost of Electrical equipment

Costs were obtained from the purchasing division of the Ministry of Health and the purchasing division of DGH Monaragala. Per day cost was calculated according to the following formula.

Per day cost = Unit price (Rs.) x Number in the medical wards / {Life span of the equipment x 365 x Average number of X-rays per day (280)}

Equipment	Lifespan	Number	Unit price (Rs.)	Total per day cost (Rs.)
Air conditioner	10	04	85,000.00	0.32
Computers	03	02	120,000.00	0.76
Light – tube lights	02	11	900.00	0.05
Total				1.13

Cost of Furniture

Costs were obtained from the purchasing division of the Ministry of Health and the purchasing division of DGH Monaragala. Per day cost was calculated according to the following formula.

Per day cost = Unit price (Rs.) x Number in the medical wards / {Life span of the equipment x 365 x Average number of X-rays per day (280)}

Equipment	Lifespan	Number	Unit price (Rs.)	Total per day cost (Rs.)
Wooden cupboards	05	01	75,000.00	0.14
Wooden tables	05	02	60,000.00	0.23
Wooden chairs	05	04	10,200.00	0.08
Plastic chairs	02	08	2,520.00	0.10
Computer tables	05	02	19,200.00	0.07
Total				0.62

Summary of the total cost of one X-ray

Cost item	Per day cost (Rs.)	Total per day cost (Rs.)
Cost of the land	0.25	
Cost of the building	1.82	
Cost for the X-ray machine	19.57	
Cost of printer	1.30	
Cost for the film	89.80	
Cost for the cassette	1.71	
Cost for the X-ray Process-Chemicals	5.30	
Cost of the electricity	4.05	
Sub total		123.80
Staff cost of inward services		
Cost of time of consultant	7.66	
Cost of time of radiographers	94.23	
Cost of time of laborers	30.85	
Total staff time cost		132.74
Cost of equipment		
Electrical equipment	1.13	
Furniture	0.62	
Sub total		1.75
Grand total		258.29