

***comparative Analysis of Unit Cost of Managing the top five Common Conditions
& Diseases in Maternity Ward .***

A case study in Kitovu and Villa Maria Hospitals.

***Research report submitted as partial fulfilment of the requirements for the award of Bachelors
Degree in Economics and Applied Statistics of Kampala International University .***

PRESENTED BY

Kirumira Kizza Charles

BEAS/36576/113/DU

July 2013.

DECLARATION

Kirumira Kizza Charles, hereby declare that I have followed the regulations of Kampala International University on research requirements and hereby state that this report is my own work.

Name: Kirumira Kizza Charles.

Signature:



Date: 18/07/2013

approval to submit.

is to certify that the following Study of Kirumira Kizza Charles which has been carried out
under the title of *"Unit Cost of Managing the 5 Common Conditions in Maternity Wards.*

A comparative Analysis of Kitovu and Villa Maria Hospitals".

study which has been done under my supervision is now ready for submission to the Degree
Research Committee of the College of Economic & Management Science (Department of
Economics & Applied Statistics) of Kampala International University with my approval.

Signature: **Pr. Sempebwa Godwin B.**

Head of Department of Statistics

Signature:

13th August, 2013.
For. Head of Department of Statistics

Date: 18/07/2013

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ECUTIVE SUMMARY

jective

main objective of this study was to improve the management of the top five maternity conditions or diseases in hospitals by providing costing information to hospital managers . The conditions of interest were normal delivery, caesarian section, malaria in pregnancy, anaemia, lss in gnancy, threatening abortion and evacuations.

thod

ross sectional study was carried out and the data collection was mainly by quantitative method. costing method used was a bottom up method that enables the reasercher to obtain the sumption of resources at every point of care and treatment.

ults

average cost of managing the top common cases in Villa Maria hospital : Normal delivery was 89,858, lss in pregnancy (expectants who are HIV positive) was shs 106,874, Caesarian section shs 173,846, Malaria in pregnancy was shs 100,202 and Anaemia was shs 116,097. average cost of managing the top common cases in Kitovu hospital maternity ward indicated following: Normal delivery was shs 69,026, Threatneing abortion was shs 74,291, Caesarian tion was shs 207,890, Malaria in pregnancy was shs 110,933 and Evacuations was shs 59,952.

sonnel cost had the biggest share of the proportionate cost ranging from 19% to 28% of dependent variables cost in all five common cases. The cost of drugs in all the four cases had a portionate cost range of 13% to 42% with threatening abortion having the least of 13% while sarian section had 42%.

clusion

average cost of the top common conditions or diseases was more in Kitovu hospital which is ited in urban compared to Villa Maria that serves the rural population. study indicated that the proportionate cost of the average cost of the independent variables is re in personnel cost, drugs or medicines and administrative cost.

ommendation

rural hospital that serves the poor people need to receive subsidy to enable them sustain the lity services and serve the poor. an hospitals like Kitovu that serve big population with high cost of providing the services also d subsidy to sustain the high employment cost, drug as well as administrative cost. ipitals should introduce unique patient number to lint inter departmental transfer of patient to e a complete cost of services.

onyms

MB: Uganda Catholic Medical Bureau

PH : Minisry of health

D : Spontenious Virginal Delivery

: Caesarian Section

CHAPTER ONE

Introduction

This chapter examines the relevancy of costing information to health sector and to hospitals in particular.

According to a major World Bank study of public hospitals (Barnum and Kutzin, 1993), the share of public sector health resources in developing countries consumed by hospitals ranges from 50 to 80 percent. By better understanding the costs of various activities, managers can improve the efficiency of various hospital departments, as well as hospital systems as a whole. Finally, the data help national policy makers decide which curative care is best delivered in hospitals, and to examine the tradeoffs among various preventive, primary curative, and secondary curative services.

Background to the study areas:

1 Kitovu St. Joseph Hospital.

Kitovu Health Care Complex (KHCC), known as St Joseph's Hospital was founded in 1955 by the late Bishop Joseph Kiwanuka, the first African Bishop in the South of the Sahara who visited Ireland and asked the Irish Sisters of the Medical Missionaries of Mary to come to Uganda.

From its inception in 1955 up to 2001, it was administered by the Religious Congregation of the Medical Missionaries of Mary (MMM) Sisters. The Irish Sisters handed over the administration of the Hospital to the indigenous Congregation; the Daughters of Mary sisters (Bannabikira) on 15th November 2001.

Joseph's Hospital, Kitovu, was established by the Diocese of Masaka about 55 years ago in Masaka District, Uganda. It is a two hundred (200) bed, Private, Not For Profit (PNFP) Hospital, operating under the umbrella organization of the Uganda Catholic Medical Bureau (UCMB)

Hospital began with Out Patient Services, followed by a small in-Patient Unit. Over the years it has grown into a large hospital. Both curative and preventive services are offered by the hospital and an Outreach programme is associated with it.

Community Based Health Care (CBHC) Programme was the first major outreach service. It was followed by the Mobile Home Care, Orphans and Education Program, which was developed in response to the AIDS epidemic in this area. Now it is a separate entity located in Soweto – Masaka Division.

ation.

located at Kitovu hill, within Masaka Municipality (which has a population of 72,400 people); within Masaka District (with a population of nearly 822,300 people); within Uganda which has a population of 30,000,000; 89% of which live in rural areas.

ices.

Kitovu Health Care Complex is a general Hospital with some specialized services such as Obstetrics/Gyneacology, Surgery and Obstetric Fistula Repair and prevention.

composed of:

- A 200 bed Hospital (+ 28 beds for new fistula unit which are used at specific time)
- A community Based / Primary Health Care Programme
- A Nutrition Education/Rehabilitation Unit
- A Psychosocial and Counselling Unit
- A Regional Blood Bank
- Laboratory Assistant Training School
- A training centre for Doctors and Nurses for VVF repair and caring for VVF sufferers; which started in November 2004 as semi-autonomous unit.
- Intern Doctors Training Programme (Makerere – linked)

ough officially it is not recognized as one of the referral hospitals, yet it shares that responsibility with Masaka Regional Referral Government Hospital that exists within the same municipality and District. Some Health Centres in Masaka, Rakai, Sembabule, Kalangala and Mpigi refer their patients to Kitovu Hospital.

Table 1: Selected Performance of Kitovu hospital related to Maternity Services.

Parameters	2006/07	2007/08	2008/09	2009/2010	2010/2011
Maternity admission	2,291	2,565	3,247	3,613	3,371
Total Deliveries	1,397	1,548	1,809	2,054	2,019
Normal delivery	882	970	1,101	1,248	1,234
Cesarean sections (C/S)	515	578	708	806	785
Threatening abortion	356	474	582	590	547
Complications	196	128	152	122	181
Malaria in Pregnancy	149	128	310	467	212
Cesarean section as a percentage of total deliveries	37%	37%	39%	39%	39%
Normal delivery as percentage of total deliveries	63%	63%	61%	61%	61%

2 Villa Maria Hospital

The Sisters of Our Lady of Africa (SOLA) arrived in Villa Maria on the 8th August 1902 and immediately set up a clinic on the verandah of their convent to help people suffering from Sleeping Sickness which had caused untold misery in the area at the time. This was the embryo of the present hospital. The clinic gradually expanded, infrastructure progressively improving and in 1964 attained the status of a hospital. The congregation managed the institution until 1976 when the White Sisters, as they were called, handed over to Bannabiikira sisters (Daughters of Mary), the congregation that manages the hospital to date. The legal owner is Masaka Diocese.

Villa Maria is a general hospital, the rank of a district hospital but for the last 7 years it has provided specialist surgical services because it has a full time surgeon. It is private-not-for-profit and is under the umbrella of UCMB. It has a Nurses' Training School attached to it since 1984.

ation.

hospital is located in South-Western Uganda in Masaka District, Kalungu County, Kalungu Sub-
nty, Villa Maria Parish. It is about 135kms from the capital city Kampala and 12km from Masaka
n. The district headquarters are 2km off Masaka town and 12km away from the hospital.
re are two larger hospitals, Masaka Regional Referral Hospital, and Kitovu Hospital, the former
ng 1.5km and the latter 3km from Masaka town. Kitovu Hospital also has consultants and is the
k of a referral hospital.

ernance & Management.

hospital has a board of governors appointed by the Bishop of Masaka and is managed by the
ers of the Daughters of Mary –Bannabiikira Sisters on behalf of the Registered Trustees of
saka Diocese in key positions.

vices

hospital provides preventive and curative services as well as diagnostic services that include X-
Ultra Sound S can, Major and Minor Operation . The hospital also provides Palliative Clinical
toral Education . Its major outputs that include : Outpatient department attendances ,
nission , Deliveries , Antenatal and Immunisation doses.

Table 2: Selected Performance of Villa Maria hospital related to Maternity Services.

Parameters	2006/07	2007/08	2008/09	2009/2010	2010/2011
Maternity admission	1,458	2,154	2,310	2,118	2,501
Total Deliveries	991	1,362	1,477	1,502	1,672
Normal delivery	661	993	1,043	1,136	1,249
Cesarian sections (C/S)	330	369	434	366	423
Haemorrhage	40	54	93	96	80
Stillbirth in pregnancy	105	167	204	204	300
Fetal loss in Pregnancy	356	305	160	153	91
Cesarian section as a percentage of total deliveries	33%	27%	29%	24%	25%
Normal delivery as percentage of total deliveries	67%	73%	71%	76%	75%

Problem Statement:

In Uganda there is an information gap on the unit cost of managing health services in the hospitals as well as in health centres. This applies to government health facilities, faith based health facilities and private for profit health facilities. Because of the lack of costing information, the hospital managers do not have evidenced cost data and information that can be used for decision making. This affects budgeting and planning for the cost of providing the services to the people in a given hospital's catchment area for a service.

Costing information is very important to a manager when the hospital intends to introduce a new service. For example to introduce maternity services, the managers need the cost data for all inputs. The need to improve the quality of the existing health services provision in a hospital requires the availability of costing information on a specific diagnosis or condition of interest. This can be done by carrying out a study of the use of resources following all the stages of care and treatment that a patient is required to attend.

Justification of the study:

Information on average cost of the selected conditions or diseases will provide an insight to the hidden and real costs involved in provision of maternal health services by the respective hospitals. Information gained from this study can be used to identify areas where costs could be reduced and where output or productivity could be increased. It may be used as a resource tool for improving financial management in the two hospitals and other hospital in UCMB network. The costing findings can be used as a bench mark for setting the basis for contractual arrangements. For example the hospital can use the finding in contracting with health insurance organization or government as a health financing method. Also hospitals can make contracts of health services with institutions that want to provide maternity services to their employees. Hospitals can use the results of this costing study as basis for identifying areas of inefficiencies by comparing the costs of outputs with other similar facilities, contracting hospital service categories and for setting or revising current patient charges of the top common conditions and diseases covered in this study.

findings of this study will provide information on the actual costs of selected maternity services in the two hospitals.

Research question:

What is the average cost of managing each the top five common diseases or conditions: Normal delivery , ceasarian section, malaria in pregnancy, evacuations and ISS in the maternity ward of Kitovu and Villa maria hospitals ?

What are the proportion of the independent variables used in the managements of top five common diseses or conditions in the maternity ward of Kitovu and Villa maria hospitals ?

Do the two hospitals incur the same cost of managing the common top diseases or conditions ?

The Goal

Improve the management of the top five maternity conditions or diseases in hospitas by using the following information to hospital managers .

1 Objectives

The following objectives would be achieved by the study.

1) determine the average cost of managing the top common five conditions or diseases in the maternity ward in Kitovu and Villa Maria hospitals.

2) To establish the proportionate cost of independent variable of top common five conditions or diseases in maternity ward of Kitovu and Villa Maria hospitals.

3) To compare the mean costs of normal delivery and caesarean section in maternity wards of Kitovu and Villa Maria hospitals.

Hypothesis one.

H_0 : The average cost of managing normal delivery is the same in Kitovu hospital and Villa Maria hospital.

H_1 : The The average cost of managing normal delivery is not the same in Kitovu hospital and Villa Maria hospital.

Hypothesis two.

H_0 : The average cost of managing ceasarian section is the same in Kitovu hospital and Villa Maria hospital.

H_1 : The average cost of managing ceasarian section is not the same in Kitovu hospital and Villa Maria hospital.

Hypothesis three.

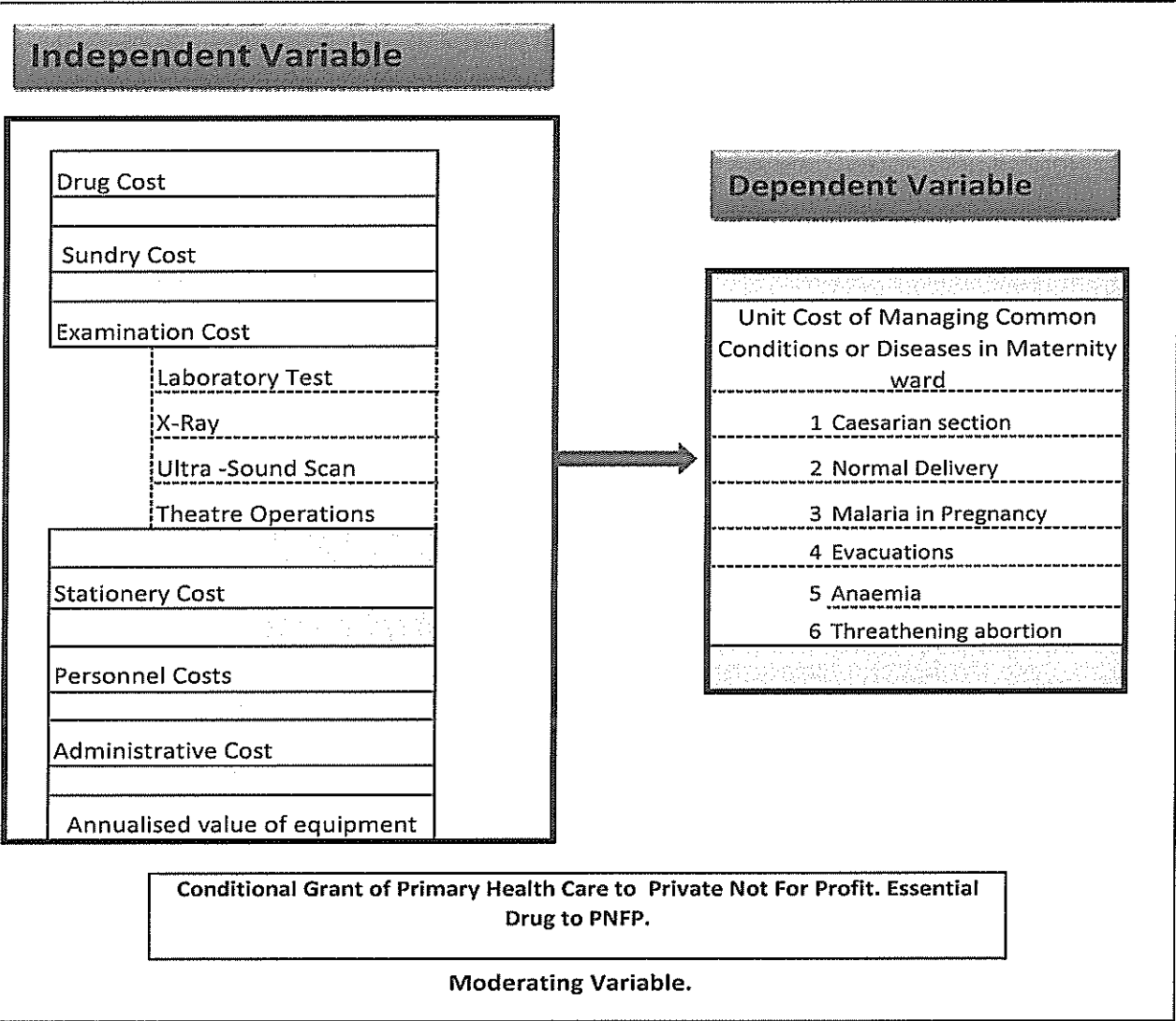
H_0 : The average cost of managing malaria inpregnancy is the same in Kitovu hospital and Villa Maria hospital.

H_1 : The average cost of managing malaria inpregnancy is not the same in Kitovu hospital and Villa Maria hospital.

Conceptual Framework

conceptual framework shown in Figure 1, shows the independent variables which determine unit cost of managing a condition (dependent variable) and the moderating variables that affects the direction and/or strength of the relation between an independent variable and a dependent variable. The independent variables are: The cost of drug used in treatment, cost of dries, cost of examinations, cost of stationery, personnel cost and admistrative cost.

Figure 1: Diagrammatic presentation of the Conceptual Framework of the study.



APTER TWO : Literature Review.

Introduction.

This chapter explores the existing literature in earlier studies which can be compared with the analysis of cost of managing a condition in maternity ward.

Bottom up costing and data collection.

It is argued that the top-down method, the allocation of average expenditures per inpatient service is obtained, but the total cost of resources (inputs) used to treat a patient with a particular disease, regardless of the number of patients served, is not estimated. Therefore, the alternative method is the bottom –up or resource costing. The bottom - upcosting requires recording of every unit of service that a patient receives and changing them into costs (Tsolmonngere Tsilaajav, 2009)¹

In this study, the bottom – up costing was used to obtain the case specific unit costs on five common diseases . The total cost a patient at the hospital consists of direct and indirect costs of all inputs (resources) use to treat various services.

Direct costs.

Direct costs are costs of inputs used in service delivery that can be directly assigned to patients. Direct cost included 1) cost of staff serviced or attended the patient 2) cost of drug and supplies used and 3) cost of diagnostic and imaging test performed.

.1 Cost of staff serviced patient

Direct cost for staff covers staff of the inpatient department where the patient admitted and the patient/emergency staff cost where patient had been initially consulted or referred from. Basic salaries and additional allowances, bonuses, contributions, payment were obtained from hospital personnel services administrative records. We also added the share of distribution fee to each staff. Summing up all staff costs gave the total staff cost of each cost centre. In order to estimate staff cost per patient, the total staff cost for each cost centre was divided by the total number of outpatient like bed days/outpatient visits/emergency visits, ancillary services. This unit cost was then multiplied by the bed days of individual patient to estimate staff cost per patient.

.2 Cost of Inpatient drugs / medicines and medical supplies

Drugs/medicine and fluids prescribed to the patient were recorded on patients charts. Acquisition costs of each drug were obtained from the pharmacy office of each site. Drugs prescribed and purchased by patients for take home or during hospital confinement were also recorded from patient's card. On the other hand, patients' charts did not show the medical supplies used for patients. The information was impossible to find from hospital patients level records within the time frame of the data collection. Medical supplies used for patients was calculated by dividing the total cost of the medical allocated to respective department/cost centre into annual total number of bed days. The department level medical supplies cost is obtained through top-down allocation process. This number is then multiplied by bed days for the specific patient to get cost of medical supplies used during the hospital stay.

.3 Cost of laboratory tests and diagnostic images

Direct cost for imaging and laboratory tests consist of staff time and medical consumables. Staff time cost per one imaging diagnostic and laboratory tests estimated by dividing the total number of tests and images performed in 2007. Then the average cost per unit of output or per diagnostic image and laboratory test will be multiplied by the number of tests and images to the patient.

In order to estimate the medical consumables, the lists, quantities and the unit cost of all supplies used in the laboratory tests and diagnostic images obtained in the consultation with laboratory and diagnostic imaging technicians. The average unit cost of each item was taken from central supplies procurement officers. Based on acquired data, total cost of medical consumables was estimated. The total cost was multiplied by number of tests and images performed for each patient in order to get the total cost of medical supplies used.

.4 Cost of surgical operation

Cost of surgical operation is incurred if patient went through such procedures. Direct cost of the surgery performed for the patient consists of the cost of staff and the cost of the medical supplies.

In the operating room (OR), the average staff cost per an hour of surgery is calculated. The average duration of each minor and major surgery types of surgical nurses. The total hours of all surgeries are estimated multiplying the average hour for minor and major types of surgeries by the total number of surgeries. The total OR staff cost then divided by the total hours to get the average staff cost per an hour of surgery. In order to get surgical staff cost per patient in the sample, the average staff cost per surgery will be multiplied by the time duration of that specific operation or procedure which is recorded in the patient chart.

The cost of surgical supplies was estimated by obtaining the list of supplies, their quantities/amounts used for specific type of minor and major surgeries performed for the patient. Unit cost of surgical supplies and consumables were taken from hospital supplies/procurement office. Among 5 disease categories examined, the most common types of surgical procedure performed included cataract repair and extra capsular cataract extraction (ECCE).

2. Indirect costs

irect costs are costs of recourse/input shared among all patients at the department of hospital. is impossible to assign these types of costs into a specific patient. Indirect cost include labor cost ministrative staff, overhead expenses (office supplies, travel expenses, communication expense), depreciation of equipment and furniture (equipment and furniture in the clinical departments, gnostic departments, operating room), equipment and building for common use.

2.1 Administrative services labor cost

rough administrative staff does not directly provide clinical services their cost should be uded I calculation of patient costs. Administrative staff such as chief of the hospital, finance and lgeting officers, housekeeping and laundry workers is responsible for ensuring a smooth vision of clinical services to all patients by providing supportive services like personnel nagement, accounting, cleaning of wards, washing of linens and supply of necessary medical I other items. Therefore in order to estimate their cost of patient level, administrative staff costs shared among all patients. We estimate their costs at patient level, administrative services cost iter and divided by total annual number of bed days which gave us the average annual ministrative staff cost per bed day. The staff cost per patient in question is then calculated ltiplying the cost per bed day by the length off stays for that patient.

2.2 Capital asset costs

ital costs are reflected of patient through calculating their depreciation value for each reporting iod. In this costing study of patient calculating their depreciation building, depreciation of erating room equipment, if a patient went through surgical procedures depreciation of image gnose and testing equipment, depreciation of building and equipment for common use, and repreciation of clinic (diagnose) equipment. Depreciation of building and equipment will be uded in total costs for patient by getting department level and total depreciation cost divided

the total number of bed days, laboratory tests, diagnostic images and surgical operations to get building depreciation cost per output. The cost will then be multiplied by length of stays of patient investigated. The study attempted to separate capital assets utilized for special department and those for common use such as conference rooms, garage, garage tank, water tank, pump station, lift and loud speaker etc. The annual depreciation cost for those capital items were allocated to each patient total cost on a bed day basis.

2.3 Other indirect costs

expenses are recorded on hospital financial statement. We separated all direct and indirect expenses which were already allocated to patients. Other indirect costs were allocated among patients on the basis of bed days. This means that the cost of these items are summed and divided total number of bed days of the hospital to get the other indirect cost per bed day. This unit cost then multiplied by the length of stays of the patient in question to estimate the total other indirect cost used.

2.4 Calculation of patient total cost

At the end, the total cost of all patients sampled in each disease category is estimated by summing the direct and indirect costs for all patients. Then the average cost for each disease category or patient is calculated by dividing the total cost into the number of patients number of samples selected in each case. In order to estimate total cost for patient services we developed a patient costing tool, output spread sheet model. This tool allowed us to look at direct cost components of all patients by all specific cost items. The tool can be used for any type of disease category.

k. Capital cost.

The main inputs of capital costs were land, building, equipment and vehicles. Data on capital costs was obtained from hospital records and by direct interview of personnel from various hospital departments of finance, administration, engineering works and transportation. The useful life of buildings (70 years), equipments and vehicles (10 years) as documented in the hospital records as per government rule was utilized to determine depreciation with time of capital inputs. The average capital cost per SVD and CS was then determined by; $\text{cost per bed per day} \times \text{average length of stay}$ (Khan, 2008)².

[APTET THREE : Methodology .

. *Introduction*

s chapter describes the study area, study population, study design, sample size, sampling
cedure, inclusion and exclusion criteria and data collection procedures used.

. *Study Area.*

study was conducted in two hospitals located in the districts Masaka and Kalungu.

. *Study Type and Design.*

study type was a descriptive cross-sectional quantitative aiming at establishing the unit cost of
naging the common maternity condtions in Kitovu and Villa Maria hospitals.

study design identified the common conditions in maternity ward for each hospital based on
secondary data.

. *Study population and Sampling.*

.1 Study Population

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1.1. Study Area.

The study was conducted in two hospitals located in the districts Masaka and Kalungu.

1.2. Study Type and Design.

The study type was a descriptive cross-sectional quantitative aiming at establishing the unit cost of managing the common maternity conditions in Kitovu and Villa Maria hospitals.

The study design identified the common conditions in maternity ward for each hospital based on secondary data.

2. Study population and Sampling.

2.1 Study Population

The targeted population was the common conditions in maternity ward in the two hospitals.

The different diagnoses were selected purposively basing on their frequency. These were: cesarean section, Normal Delivery, Malaria in Pregnancy, Evacuations, Iss in pregnancy and anaemia

1.2 Quota Sampling.

quota sampling approach was used, where the charts for each condition or disease was picked from the different months until the sample size was got.

1.3 Sample Size.

to determine the sample of the top common conditions and diseases in maternity ward , a purposive sampling was used to get the set quota. This was based to the availability of the patient charts and the cost of study. The quotas were determined based on the performance of 2010/2011 financial year. For the frequency of a condition or disease the following percentage were used : 50 to 199 (30%), 200 to 999 (10%) and above 1000 cases 5%.

Table 3 : Set quota and the actual patients' charts examined for the selected condition or disease.

Hospital Years	Villa Maria Hospital			Kitovu Hospital		
	2010/2011	Quota	Actual	2010/2011	Quota	Actual
Normal delivery	1,249	60	59	1,234	62	64
Cesarian sections (C/S)	423	50	48	785	79	114
Anaemia	80	20	12			
High blood pressure in pregnancy	300	30	26			
Malaria in Pregnancy	91	30	28	212	64	43
Vacuations				181	54	40
Threatening Abortion				547	55	45

3. Study units:

The study unit was the maternity ward in the Kitovu and Villa Maria Hospitals.

4. Data collection tools.

The data was collected using semi structured forms which included.

- 1. Form 1 : Medicine and medical supplies,
- 2. Form 2: Examination on laboratory, X-ray, Ultra - Sound Scan and theatre operations,
- 3. Form 3: Personnel cost
- 4. Form 4: Building cost
- 5. Form 5: Medical equipment cost,
- 6. Stationery cost

as indicated in annex 1.

5 Method of Data Collection.

a patient path approach provides a systematic way of costing the consumption of resources from every point where a patient obtains care and treatment. The method of costing the specific condition in maternity ward followed the protocol that an expectant went through from the conception up to the discharge. A set of structured data collection forms were used to extract secondary data from the patients' charts. See annex 1.

p1 Registration.

resources costed at the reception included stationery and human resource. The registration took an average time of 2 minutes.

p 2. Investigation . Depending on condition of the expectant the following investigation were extracted from the patient charts: laboratory test, theatre operation, X-ray and Ultra-Sound Scan.

resources costed included personnel cost of the cadres involved for example laboratory test (laboratory technician), reagents, consumable and cost of stationery .

p 3. Diagnosis or condition.

the different specific diagnosis , the resources costed were extracted from the patient charts included the following : medicines used, medical supplies for example syringes and stationery used . From each patients' charts the different investigations costed in step 2 were extracted. The personnel cost for respective cadres were costed basing on the average time used.

p 4. Recording of patient & treatment details.

resources costed included personnel cadres involved and stationery (medical resgister). The resources were cost using the average time used by the personnel and cost of stationery used.

Step 5 . Making payments.

The patients or the attendant make payment at the cashier's office. The resources consumed included the personnel cost (cashier) , stationery and computer services.

Step 6. Dispensing.

The quantity of all medicines used by the patient as indicated on the patient chart were extracted with the guidance of the clinical staff to ensure that medicines prescribed were recorded in the right doses and valued using the price list of the respective hospitals. The stationery used was also listed.

Step 7. Administrative cost.

The resources used included administrative staff, stationery and annualized values (depreciation) of medical equipment in use in the maternity ward for period of one year.

Data collection tools.

Unit of Analysis.

The unit of analysis were the five common conditions or diseases in the maternity ward of Kitovu and in Villa Maria hospitals.

3. Data Analysis and Presentation

3.1 Data Analysis

The quantitative data collected from the maternity wards of the two hospitals, was cross checked and valued using the respective hospital price lists. The valued data for each condition or disease is arranged and analyzed into tables showing the following variables: cost for drugs, medical supplies, stationery, cost of the laboratory test, X-ray cost, ultra - sound scan cost and theatre operations cost. The other variables were personnel cost and overhead cost (administrative and depreciation costs). The proportionate share of each variable and the interval estimate of a unit cost for each condition or disease was computed . The analysis of variance for the conditions that are common in Kitovu and in Villa Maria hospitals was done to find out whether the average unit cost for common condition or disease was different in the two hospitals. The analysis was done using Microsoft Excel.

3.2 Data Presentation

The analyzed data was presented in the form of tables and graphs to illustrate the results.

Study Limitation:

Common conditions varied in the two hospitals . So it was not possible to test the variability of the mean cost of all the selected 5 conditions in the study.

9 Definition of Variables.

9.1 Drugs.

ugs refers to the prescribed and administered medicine for the condition or disease.

9.2 Medical supplies.

edical supplies refers to the supplies used to administer medicines like iv-giving set, canula, ringes , blood giving sets and gloves.

9.3 Stationery.

ationery refer to all medical and diagnostic forms as well as envelops , pencils, pens used from gistering to dispensing of drugs.

9.4 Examination cost.

amination cost refers to the laboratory test cost, X-ray cost, Ultra-Sound Scan test and Theatre erations cost incurred for a required investigation.

9.5 Personnel cost.

ese are the human resource cost of the cadres who provided service to the patient.

9.6 Adminstrative cost.

ministrative cost inclides the human resource cost of the adminsrative staff and the depreciation st of the medical equipments used in the treatment of a condition or disease.

Chapter Four. : Analysis

1) Introduction

This chapter is intended to give the analysis of the unit cost for the selected conditions and diseases under each objective.

Objective One: To determine the Average Cost of managing the top common five conditions or diseases in maternity ward in Kitovu and Villa Maria hospitals.

As described in the methodology section, the cost of one condition or disease for patients who presented cases of Normal delivery, Caesarian sections (C/S), Anaemia, ISS inpregnancy, Malaria in pregnancy was calculated through collection of various direct and indirect costs as shown in Table

1.1 Villa Maria Hospital.

Table A1: Unit cost of selected top common 2 conditions and 3 diseases in Maternity ward of Villa Maria hospital.

Unit cost components	Normal delivery (Shs- average costs)	Proportion of independent variable average cost of Normal delivery cost	ISS in pregnancy (Shs-average costs)	Proportion of independent variable average cost of ISS in pregnancy cost.	Caesarian Section (Shs- average costs)	Proportion of independent variable average cost of Caesarian section cost.	Malaria in pregnancy (Shs- average costs)	Proportion of independent variable average cost of Malaria in pregnancy cost.	Anaemia (Shs- average costs)	Proportion of independent variable average cost of Anaemia cost.
Total cost	65,723	73%	76,113	71%	131,665	76%	69,442	69%	85,337	74%
Cost of drugs	23,406	26%	13,642	16%	27,464	16%	16,753	18%	20,178	17%
Cost of sundries	8,705	10%	22,271	27%	45,547	26%	13,286	15%	18,725	16%
Stationery Cost	564	1%	819	1%	891	1%	734	1%	813	1%
Cost of Laboratory Test	6,500	7%	8,083	10%	13,137	8%	2,839	3%	19,792	17%
Cost of Ultra Sound Scan	10,000	11%	7,613	9%	10,150	6%	10,000	11%		0%
Personnel Cost	16,546	18%	23,684	28%	34,477	20%	25,830	29%	25,830	22%
Direct cost	24,135	27%	30,761	29%	42,181	24%	30,761	31%	30,761	26%
Instrumentation Cost	12,830	14%	12,830	15%	12,830	7%	12,830	14%	12,830	11%
Estimated value of medical equipment per condition or disease	5,445	6%	12,071	6%	19,575	11%	12,071	13%	12,071	10%
Estimated value of building condition or disease	5,860	7%	5,860	0.05	9,776	6%	5,860	6%	5,860	5%
Unit of average cost of dependence variable	89,858		106,874		173,846		100,202		116,097	

verage cost.

The cost of managing the top common cases were as follows: Normal delivery was shs 89,858, Iss pregnancy (expectants who are HIV positive) was shs 106,874, Caesarian section was shs 3,846, Malaria in pregnancy was shs 100,202 and Anaemia was shs 116,097.

1.2 Kitovu Hospital.

Table A2: Unit cost of selected top common 4 conditions and 1 disease in Maternity ward of Kitovu hospital.

Unit cost components	Normal delivery (Shs- average costs)	Proportion of independent variable average cost of Normal delivery cost	Threatening Abortion (Shs- average costs)	Proportion of independent variable average cost of Threatening Abortion cost.	Caesarian Section (Shs- average costs)	Proportion of independent variable average cost of Caesarian section cost.	Malaria in pregnancy (Shs- average costs)	Proportion of independent variable average cost of Malaria in pregnancy cost.	Evacuations (Shs- average costs)	Proportion of independent variable average cost of Evacuations cost.
Unit cost	33,241	48%	38,506	52%	147,894	71%	75,148	68%	41,426	69%
Cost of drugs	9,892.2	14%	9,322	13%	86,635	42%	26,566	24%		
Cost of sundries	4,724.5	7%	9,549	13%	15,969	8%	8,873	8%		
Operatory Cost	332.8	0%	387	1%	1,574	1%	527	0%		
Cost of Laboratory Test	421.9	1%	1,378	2%	1,460	1%	7,643	7%	12,175	13%
Unit cost per radiography									12,000	13%
Cost of Ultra Sound Scan	-	0%	-	0%	-	0%	-	0%	17,250	18%
Personnel Cost	17,870.1	26%	17,870	24%	42,255	20%	31,540	28%	18,527	19%
Total unit cost	35,785	52%	35,785	48%	59,996	29%	35,785	32%	35,791	60%
Instruction Cost	15,380	22%	15,380	21%	15,380	7%	15,380	14%	15,296	16%
Payment per condition or disease	10,545	15%	10,545	14%	29,356	14%	10,545	10%	10,582	11%
Realised value of building per condition or disease	9,860	14%	9,860	13%	15,260	7%	9,860	9%	9,913	10%
Unit of average cost of independent variable	69,026		74,291		207,890		110,933		59,952	

erage cost.

e cost of managing the top common cases in Kitovu hospital maternity ward were as follows:

ormal delivery was shs 69,026, Threatneing abortion was shs 74,291, Caesarian section was shs 7,890, Malaria in pregnancy was shs 110,933 and Evacuations was shs 59,952.

2 Objective two: To establish the proportionate cost of independent variable of top common five conditions or disease in maternity ward of Kitovu and Villa Maria hospitals.

The proportionate cost of the independent variable of the top common five cases in maternity ward were established by dividing the average independent variable cost by the average total cost of all the independent variables.

2.1 Villa Maria Hospital.

From Table A3 , on average the direct costs take above 65% of the total cost of managing an expectant' condition or disease in Villa Maria hospital maternity ward.

Table A3: Proportionate cost of independent variable of top common five conditions or disease in maternity ward (Villa Maria Hospita).

Unit cost components	Proportion of independent variable average cost of Normal delivery cost	Proportion of independent variable average cost of ISS in pregnancy cost.	Proportion of independent variable average cost of Caesarian section cost.	Proportion of independent variable average cost of Malaria in pregnancy cost.	Proportion of independent variable average cost of Anaemia cost.
Direct cost	73%	71%	76%	69%	74%
Cost of drugs	26%	13%	16%	18%	17%
Cost of sundries	10%	21%	26%	15%	16%
Stationery Cost	1%	1%	1%	1%	1%
Cost of Laboratory Test	7%	8%	8%	3%	17%
Cost of Ultra Sound Scan	11%	7%	6%	11%	0%
Personnel Cost	18%	22%	20%	29%	22%
Direct cost	27%	29%	24%	31%	26%
Administration Cost	14%	12%	7%	14%	11%
Amortised value of medical equipment per condition or disease	6%	11%	11%	13%	10%
Amortised value of building per condition or disease	7%	5%	6%	6%	5%

irect cost

rsonnel cost had the biggest share of the proportionate cost of 20% to 29% of independent
riables cost in all five except normal delivery with 18% which was less than 26% for it share for
ugs. Malaria in Pregnancy had 29% the highest proportionate cost.

e cost of drugs in all the five cases had a proportionate cost range of 13% to 26% with lss in
egnancy having the least of 13% while Normal delivery had 26%.

e proportionate cost of sundries was more in lss in pregnancy with 21% and in Caesarian section
ich had 26%. Normal delivery had the least of 10%.

irect cost.

ong the indiect cost administrative cost which included personnel cost and administrative
enses had biggest proportionate cost share which ranges from 7% to 14%. This was followed by
e annualized value of medical equipment with a range of 6% to 13% while the annulised value of
ilding had low share with a range of 5% to 7% .

2.2 Kitovu Hospital

ble A3: Proportionate cost of independent variable of top common five conditions or disease in
ternity ward (Kitovu Hospita).

Unit cost components	Proportion of independent variable average cost of Normal delivery cost	Proportion of independent variable average cost of ThreateningAborti on cost.	Proportion of independent variable average cost of Caesarian section cost.	Proportion of independent variable average cost of Malaria in pregnancy cost.	Proportion of independent variable average cost of Evacuations cost.
irect cost	48%	52%	71%	68%	69%
st of drugs	14%	13%	42%	24%	
st of sundries	7%	13%	8%	8%	
ationery Cost	0%	1%	1%	0%	
st of Laboratory Test	1%	2%	1%	7%	13%
ray cost per radiography					13%
st of Ultra Sound Scan	0%	0%	0%	0%	18%
rsonnel Cost	26%	24%	20%	28%	19%
irect cost	52%	48%	29%	32%	60%
minstration Cost	22%	21%	7%	14%	16%
nualised value of medical uipment per condition or ease	15%	14%	14%	10%	11%
nualised value of building per ndition or diasease	14%	13%	7%	9%	10%

rect cost

ersonnel cost had the biggest share of the proportionate cost ranging from 19% to 28% of dependent variables cost in all five common cases. Malaria in Pregnancy had the highest proportionate cost of 29%.

e cost of drugs in all the four cases had a proportionate cost range of 13% to 42% thThreatening abortion having the least of 13% while Caesarian section had 42%.

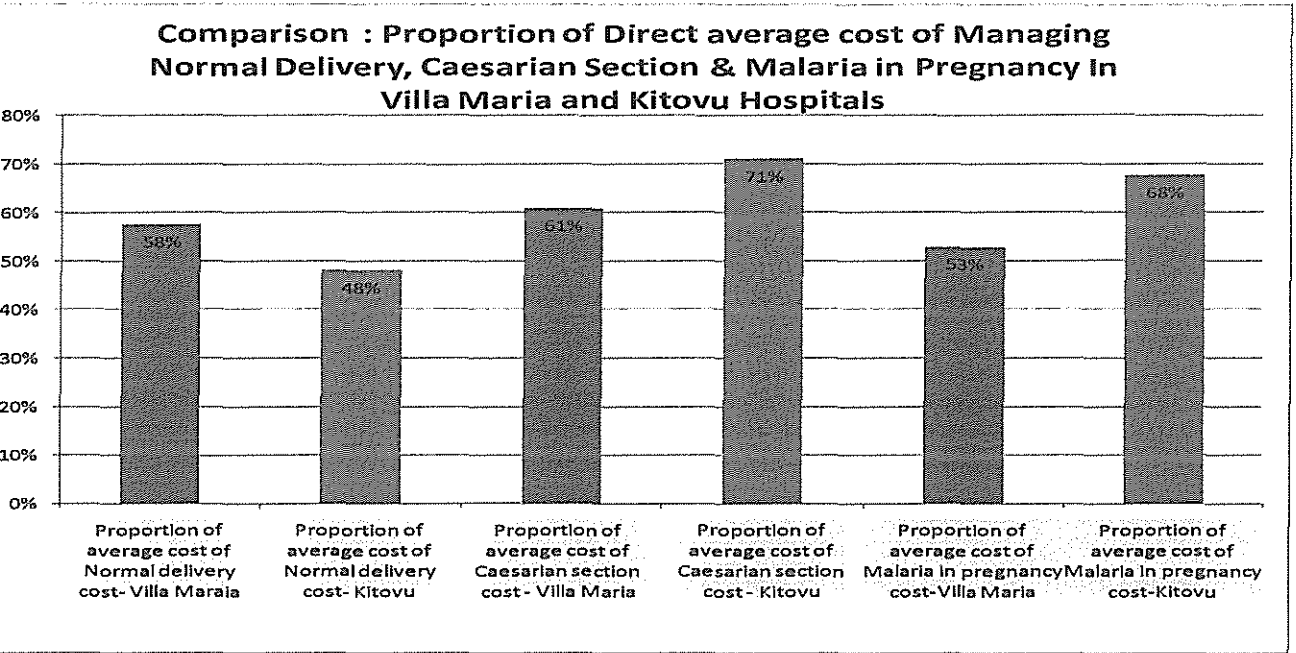
e proportionate cost of sundies was ranged from 7% to 13% .

boratory cost had low proportionate cost share except in Evacuations which had 13%.

direct cost.

mong the indirect cost administrative cost which included personnel cost and administrative penses had biggest proportionate cost share which ranges from 7% to 22%. This was followed by e annualized value of medical equipment with a range of 10% to 15% while annulaised value of ilding had low share with a range of 7% to 14% .

aph 2: Comparison of Average Direct Cost of Villa Maria & Kitovu Hospitals (Proportion)



ie graph shows that Villa Maria used more direct costs on normal delivery than Kitovu while tovu used more resources on caesarian section and malaria in pregnancy.

Objective three: To compare the mean costs of Normal delivery, Malaria in pregnancy and cesarean section in maternity wards of Kitovu and Villa Maria hospitals.

The comparison is to show whether the average cost of cases that are common in the two hospitals are not the same.

Using the collected data from the two hospitals shown in Appendix I, the following summary statistics were computed.

1 Mean cost of Normal Delivery for Villa Maria and Kitovu hospitals.

Table A 4: Summary statistics.

Description	Cost of conducting Normal delivery (Villa Maria hospital)	Cost of conducting Normal delivery (Kitovu hospital)	Total
Sample size (Ni)	59	64	123
	3,241,980	4,417,681	7,659,661
Mean= $\sum x_i / N_i$	54,949	69,026	62,274
$\sum x_i^2$	188,770,300,546	332,264,384,288	521,034,684,834
$\sum (x_i)^2$	10,510,436,807,389	19,515,902,146,083	58,670,406,838,155
$S^2 = \sum x_i^2 - (\sum x_i)^2 / N_i$	10,627,303,810	27,328,413,256	44,039,507,288
Let M be the Mean	MV = 54,949	MK = 69,026	MT = 62,274
Squared deviates of the mean= $(MT - M_i)^2$	$(62,274 - 54,949)^2$	$(62,274 - 69,026)^2$	
Sum of squared deviates of the mean. = $N_i(MT - M_i)^2$	3,165,681,875	2,917,728,256	6,083,410,131

The mean cost of conducting a normal delivery varied by shs 14,077 (shs 69,026 –shs 54,949) between Villa Maria and Kitovu hospitals.

sting the hypothesis

e test enable me to conclude on the variability of the men cost between the two hospitals

ep 1. Stating of the Hypothesis one.

H_0 : The average cost of conducting a normal delivery is the same in Kitovu hospital and Villa Maria hospital.

H_1 : The The average cost of managing normal delivery is not the same in Kitovu hospital and Villa Maria hospital.

ep 2. Assumption of the test statistics.

e tests in an ANOVA are based on the F-ratio: the variation due to an experimental treatment or effect divided by the variation due to experimental error. The null hypothesis is this ratio equals 1, or the treatment effect is the same as the experimental error.

ep3. State the test statistics.

e Analysis of Variance (ANOVA) one –way test was used.This ANOVA follows an F-distribution of F-test.

ep 4. Select the level of signficancy.

e $\alpha = 5\%$ level of signficancy was used.

Step 5. Computation of the observed F-Ratio using the ANOVA table

Using the summary statistics from Table A 4, the ANOVA table is completed.

Source	Sum of squares	Degree of freedom =df	Mean of squared deviates = MS	F-Ratio
Sum of square deviates between -groups (SSbg)	6,083,410,131	1	6,083,410,131	19.39
Sum of square deviates within -groups (SSwg)	37,955,717,066	121	313,683,612	
Total sum of square= SSbg+SSwg	44,039,127,197	122		

Step 6. Rejection criteria.

A null hypothesis H_0 is rejected if the calculated F-Ratio is > the F-RatioTable ($F_{cal} > T_{tab}$) at $\alpha=0.05$. The H_0 is accepted if the $F_{cal} < T_{tab}$ at the predetermined level of significance say 0.05

Conclusion.

Since the $F_{cal} = 19.39 > T_{tab} = 3.92_{df(1,122)}$, the null hypothesis that the average cost of conducting normal delivery is the same in Kitovu hospital and Villa Maria hospitals is rejected on ground that significant differences were found in mean cost of conducting normal delivery in the two hospital maternity wards at 95% confidence interval.

2 Mean cost of managing a Ceasarian Section for Villa Maria and Kitovu hospitals.

ble A 5: Summary statistics.

escription	Cost of Caesarian section (Villa Maria hospital)	Cost of Caesarian section (Kitovu hospital)	Total
ample size (Ni)	48	114	162
xi	7,916,528	23,697,969	31,614,497
lean= $\sum xi / Ni$	164,927.66	207,876.92	195,151.21
$\sum xi^2$	1,368,389,485,783	5,149,649,078,741	6,518,038,564,523
$\sum (xi)^2$	62,671,407,804,369	561,593,737,805,696	999,476,393,641,893
S = $\sum x^2i - (\sum xi)^2 / Ni$	62,735,156,525	223,388,220,796	348,431,196,363
st M be the Mean	MV = 164,927.66	Mk = 207, 876.92	MT = 372,804.58
Squared deviates of the mean= $(MT-Mi)^2$	$(372,804.58-164,927.66)^2$	$(372,804.58-207,872.92)^2$	
um of squared deviates of the mean = $Ni(MT-Mi)^2$	43,846,243,029.94	18,461,576,012.61	62,307,819,042.55

e mean cost of managing a ceasarian section varied by shs 42,949.27 (shs 207,876.92 –shs 1,927.66) between Villa Maria and Kitovu hospitals.

ating the hypothesis

e test enable me to conclude on the variability of the men cost between the two hospitals

Step 1. Stating of the Hypothesis two.

H_o : The average cost of managing ceasarian section is the same in Kitovu hospital and Villa Maria hospital.

H₁ : The average cost of managing ceasarian section is not the same in Kitovu hospital and Villa Maria hospital.

ep 2. Assumption of the test statistics.

ie tests in an ANOVA are based on the F-ratio: the variation due to an experimental treatment or
fect divided by the variation due to experimental error. The null hypothesis is this ratio equals
0, or the treatment effect is the same as the experimental error.

ep3. State the test statistics.

ie Analysis of Variance (ANOVA) one –way test was used.This ANOVA follows an F-distribution of
e F-test.

ep4. Select the level of significancy.

ie α = 5% level of significancy was used.

ep 5. Computation of the observed F-Ratio using the ANOVA table

ing the summary statistics from Table A 5, the ANOVA table is completed.

Source	Sum of squares	Degree of freedom =df	Mean of squared deviates = MS	F-Ratio
Sum of square deviates between - groups (SSbg)	62,307,819,043	1	62,307,819,043	35.06
Sum of square deviates within - groups (SSwg)	286,123,377,321	161	1,777,163,834	
Totak sum of square= SSbg+SSwg	348,431,196,363	162		

3 Mean cost of managing a Ceasarian Section for Villa Maria and Kitovu hospitals.

ble A 6: Summary statistics.

escription	Cost of Treating Malaria in pregnancy (Villa Maria hospital)	Cost of Malaria in pregnancy (Kitovu hospital)	Total
ample size (Ni)	28	43	71
xi	2,535,668	4,762,487	7,298,155
lean = $\sum xi / Ni$	90,559.58	110,755.51	102,790.92
$\sum xi^2$	237,523,849,724	563,039,012,169	800,562,861,894
$\sum (xi)^2$	6,429,613,357,809	22,681,283,608,256	53,263,071,531,506
$s^2 = \sum x^2 i - (\sum xi)^2 / Ni$	7,894,801,231	35,567,300,349	50,378,755,816
st M be the Mean	MV = 90,559.58	Mk = 110, 755.51	MT =102,790.92
Squared deviates of e mean= (MT-Mi)^2	(102,790.92- 90,559.58)^2	(102,790.92- 110,755.51)^2	
Sum of squared eviates of the mean = Ni(MT-Mi)^2	4,188,959,607.43	2,727,694,628.09	6,916,654,235.52

e mean cost of managing a ceasarian section varied by shs 20,195.93 (shs **110,755.51** –shs **559.58**) between Villa Maria and Kitovu hospitals.

ating the hypothesis

e test enable me to conclude on the variability of the men cost between the two hospitals
Step 1. Stating of the Hypothesis three.

H₀ : The average cost of managing malaria inpregnancy is the same in Kitovu hospital and
Villa Maria hospital.

H₁ : The average cost of managing malaria inpregnancy is not the same in Kitovu hospital
and Villa Maria hospital.

Step 2. Assumption of the test statistics.

The tests in an ANOVA are based on the F-ratio: the variation due to an experimental treatment or effect divided by the variation due to experimental error. The null hypothesis is this ratio equals 1, or the treatment effect is the same as the experimental error.

Step 3. State the test statistics.

An Analysis of Variance (ANOVA) one-way test was used. This ANOVA follows an F-distribution of F-test.

Step 4. Select the level of significance.

A $\alpha = 5\%$ level of significance was used.

Step 5. Computation of the observed F-Ratio using the ANOVA table

Using the summary statistics from Table A 6, the ANOVA table is completed.

Source	Sum of squares	Degree of freedom =df	Mean of squared deviates = MS	F-Ratio
Sum of square deviates between - groups (SSbg)	6,916,654,236	1	6,916,654,236	10.98
Sum of square deviates within - groups (SSwg)	43,462,101,581	69	629,885,530	
Total sum of square= SSbg+SSwg	50,378,755,816	70		

Step 6. Rejection criteria.

The null hypothesis H_0 is rejected if the calculated F-Ratio is $>$ the F-Ratio Table ($F_{cal} > T_{tab}$) at $\alpha = 0.05$. The H_0 is accepted if the $F_{cal} < T_{tab}$ at the predetermined level of significance say 0.05.

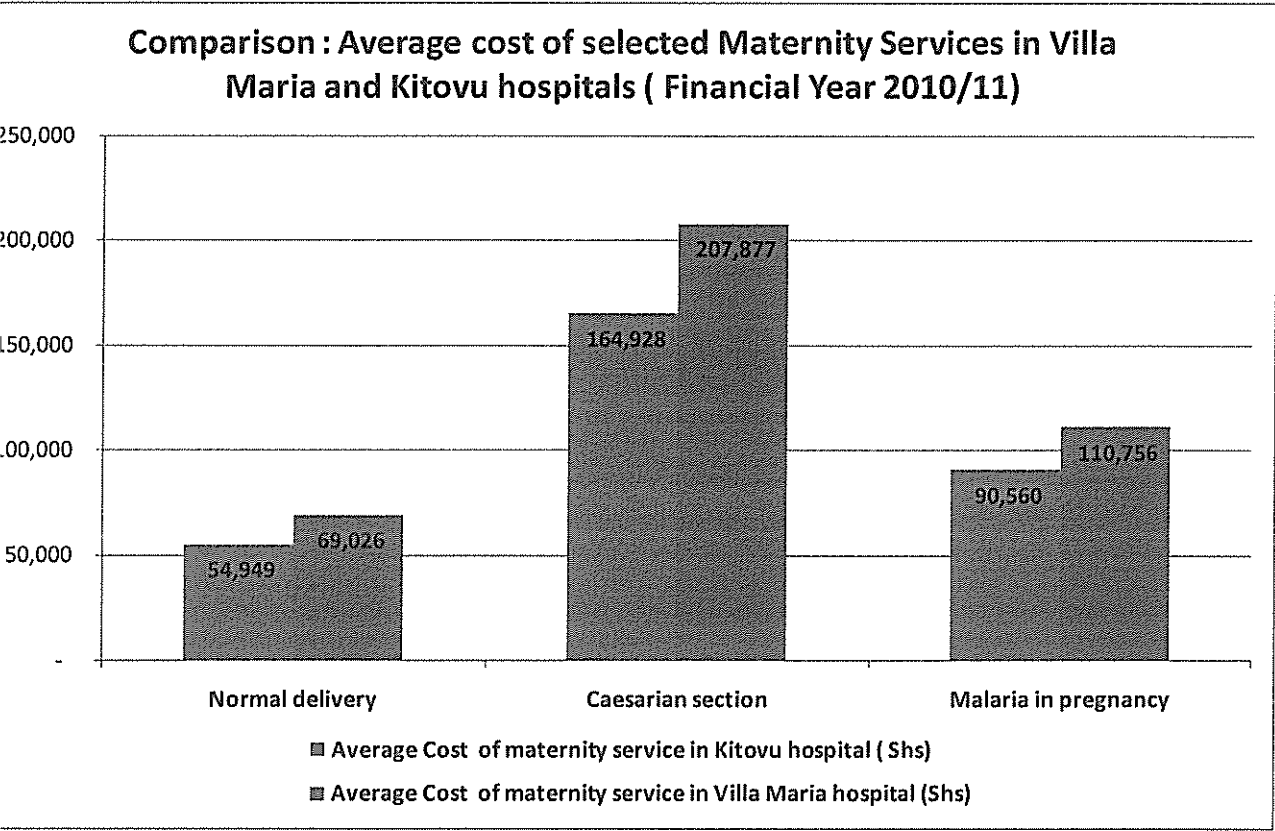
Conclusion.

Since the $F_{cal} = 19.26 > T_{tab} = 3.98_{df(1,70)}$, the null hypothesis that the average cost of managing malaria in pregnancy in Villa Maria and Kitovu hospitals are equal is rejected on ground that significant differences were found in mean cost of managing malaria in pregnancy in the two hospital maternity wards at 95% confidence interval.

Chapter Four : Discussion of the findings, conclusions and recommendations.

The analysis is presented under each objective showed the findings for selected conditions or diseases.

Graph 5: Comparison of the Average Cost of the Common Conditions and Disease.



The findings on the common conditions and diseases in Villa Maria and Kitovu hospitals as shown in the Graph 5, indicated that average cost of normal delivery, caesarian section and malaria in pregnancy were higher in Kitovu than in Villa Maria.

The low average cost in Villa Maria hospital imply the rural characteristics of the catchment area and population that the hospital serves. The urban characteristics where Kitovu hospital is located in Masaka municipality points to the high average cost that is influenced by the cost of living which relates directly to the employment cost and the administrative costs.

The proportion of average direct cost as analysed under objective two indicated that Kitovu hospital incurs more on direct cost and indirect cost than Villa Maria.

The high administrative services under the indirect cost observed in Kitovu hospital reflected the existing hospital complex of Kitovu hospital which emphasized the need to plan for the maintenance of the infrastructure and unit services like the Blood bank.

Personnel cost had the biggest share of the proportionate cost ranging from 19% to 28% of dependent variables cost in all five common cases. Malaria in Pregnancy had the highest proportionate cost of 29%.

The employment cost is one of the cost drivers of the cost of health services in the hospitals. This implied that hospital managers have to strive to compensate their employees with salaries that are comparable to the Central Government salaries. This could reduce the staff attrition rate due to low payment in Private Not for Profit (PNFP) hospitals compared to government hospitals.

The cost of drugs in all the four cases had a proportionate cost range of 13% to 42% with Threatening abortion having the least of 13% while Caesarian section had 42%.

The availability of drugs in the hospital is a proxy to quality services in a hospital but the high proportion of the average cost is likely to affect the accessibility of services especially to the poor.

The proportionate cost of sundries ranged from 7% to 13%. Laboratory cost had low proportionate share except in Evacuations which had 13%. The sundries are key input in the diagnostic services.

1 Limitations

The unit cost of managing a condition or disease in maternity wards using the bottom up method costing the entire protocol involves the use of resources from the outpatient ward. This information could not be readily obtained due to lack of unique patient number in hospitals. The use of names can not give the exact match for all the sample.

.2 Conclusion.

the study proved that the proportionate cost of the average cost of the independent variables is more in personnel cost, drugs or medicines and administrative cost.

the average cost of the top common conditions or diseases was more in Kitovu hospital which is located in urban compared to Villa Maria that serves the rural population.

3 Recommendations.

the rural hospital that serves the poor people need to receive subsidy to enable them sustain the quality services and serve the poor.

urban hospitals like Kitovu that serve big population with high cost of providing the services also need subsidy to sustain the high employment cost, drug as well as administrative cost.

hospitals should introduce unique patient number to limit inter departmental transfer of patient. This will make a complete costing of services.

Normal Delivery

Patient Identification Number	Total Cost of drugs	Total Cost of sundries	Total Stationery Cost	Cost Lab Test	Cost Ultra Sound Scan	Personnel Cost	Administration Cost	Annualised value of medical equipment per condition or patient	Annualised value of building per condition	Cost for each Normal delivery
016	18,195	19,650	600	2000		16,546	12,830	5,445	5,860	81,127
018	470	19,650	450			16,546	12,830	5,445	5,860	61,252
022	1,670	500	450			16,546	12,830	5,445	5,860	43,302
025	12,490	26,100	900	4000		16,546	12,830	5,445	5,860	84,172
1176	1,270	500	450			16,546	12,830	5,445	5,860	42,902
2060	1,670	500	450			16,546	12,830	5,445	5,860	43,302
2061	1,670	500	450			16,546	12,830	5,445	5,860	43,302
2062	1,270	500	450			16,546	12,830	5,445	5,860	42,902
2063	3,320	500	600	2000		16,546	12,830	5,445	5,860	47,102
2065	1,670	500	450			16,546	12,830	5,445	5,860	43,302
2452	670	5300	300			16,546	12,830	5,445	5,860	46,952
2459	2,895	14000	600			16,546	12,830	5,445	5,860	58,177
2460	5,045	500	450			16,546	12,830	5,445	5,860	46,677
2461	1,255	13800	750	2000		16,546	12,830	5,445	5,860	58,487
2464	7,670	13800	600			16,546	12,830	5,445	5,860	62,752
2468	1,670	500	600	14000		16,546	12,830	5,445	5,860	57,452
2469	8,045	700	450			16,546	12,830	5,445	5,860	49,877
2472	1,270	500	450			16,546	12,830	5,445	5,860	42,902
2479	1,130	13800	600			16,546	12,830	5,445	5,860	56,212
2480	10,010	500	600	2000		16,546	12,830	5,445	5,860	53,792
2481	1,170	13800	750	7000		16,546	12,830	5,445	5,860	63,402
2486	1,170	13800	600			16,546	12,830	5,445	5,860	56,252
2496	1,470	13800	750	7000		16,546	12,830	5,445	5,860	63,702
2501	2,775	500	600	1500		16,546	12,830	5,445	5,860	46,057
2502	5,020	13800	750	2000		16,546	12,830	5,445	5,860	62,252
2503	1,520	500	450			16,546	12,830	5,445	5,860	43,152
2506	1,045	500	450			16,546	12,830	5,445	5,860	42,677
2507	1,670	19300	750	9000		16,546	12,830	5,445	5,860	71,402
2509	1,420	14000	600			16,546	12,830	5,445	5,860	56,702
2512	8,670	19300	600	7000		16,546	12,830	5,445	5,860	76,252
2513	4,000	10600	750		10,000	16,546	12,830	5,445	5,860	66,032
2515	1,020	500	450			16,546	12,830	5,445	5,860	42,652
2516	545		600	2000		16,546	12,830	5,445	5,860	43,827
2517	6,175	8350	750	19000		16,546	12,830	5,445	5,860	74,957
2519	1,670	19300	750			16,546	12,830	5,445	5,860	62,402
2519	1,020	500	450			16,546	12,830	5,445	5,860	42,652
2524	1,120	500	450			16,546	12,830	5,445	5,860	42,752
2525	4,150	1050	450			16,546	12,830	5,445	5,860	46,332
2526	1,270	500	450			16,546	12,830	5,445	5,860	42,902
2531	7,570	17,700	750	9000		16,546	12,830	5,445	5,860	75,702
2533	6,670		600			16,546	12,830	5,445	5,860	47,952
2538	1,670	350	450			16,546	12,830	5,445	5,860	43,152
2540	10,670	19,300	750	2000		16,546	12,830	5,445	5,860	73,402
2541	7,070	19300	600			16,546	12,830	5,445	5,860	67,652
2541	1,270	500	450			16,546	12,830	5,445	5,860	42,902
2551	15,520		450			16,546	12,830	5,445	5,860	56,652
2552	6,845	14300	600			16,546	12,830	5,445	5,860	62,427
2556	18,940	19,000	600			16,546	12,830	5,445	5,860	79,222
2559	1,670	500	450			16,546	12,830	5,445	5,860	43,302
2576	625		450			16,546	12,830	5,445	5,860	41,757
2577	5,510	500	600	2000		16,546	12,830	5,445	5,860	49,292
2581	1,670	500	450			16,546	12,830	5,445	5,860	43,302
2589	7,420	13800	750	21000		16,546	12,830	5,445	5,860	83,652
2593	11,210	29650	750	9000		16,546	12,830	5,445	5,860	91,292
2624	1445	350	450			16,546	12,830	5,445	5,860	42,927
2628	1570	500	450			16,546	12,830	5,445	5,860	43,202
2631	1770	500	600			16,546	12,830	5,445	5,860	43,552
2634	5020	8800	600			16,546	12,830	5,445	5,860	55,102
2650	1770	350	450			16,546	12,830	5,445	5,860	43,252
Age	4,172	7,796	564	6,500	10,000	16,546	12,830	5,445	5,860	69,715
%	6%	11%	1%	9%	14%	24%	18%	8%	8%	

Caesarian Section.

patient entifica in umber	Total Cost of drugs	Total Cost of sundries	Total Stationery Cost	Cost Lab Test	Cost Ultra Sound Scan	Personnel Cost	Adminstration Cost	Annualised value of medical equipment per condition or disease	Annualised value of building per condition	Cost for each Caesarian section.
2791	19,090	60,450	750	2,000		35,285	12,830	19,575	9,776	159,756
2796	30,440	73,000	750	2,000		35,285	12,830	19,575	9,776	183,656
2788	21,150	35,750	900	2,000		35,285	12,830	19,575	9,776	137,266
2747	31,925	63,700	900	3,500	10,000	35,285	12,830	19,575	9,776	187,491
2719	22,450	64,400	900	9,000		35,285	12,830	19,575	9,776	174,216
2714	13,950	25,000	900	2,000		35,285	12,830	19,575	9,776	119,316
2722	67,400	35,850	900	28,000		35,285	12,830	19,575	9,776	209,616
2792	19,060	30,950	900	9,000		35,285	12,830	19,575	9,776	137,376
2797	18,000	51,500	900	28,000		35,285	12,830	19,575	9,776	175,866
2651	15,970	43,300	900	21,000		35,285	12,830	19,575	9,776	158,636
2672	83,150	44,300	900	21,000		35,285	12,830	19,575	9,776	226,816
2638	55,370	46,150	900	21,000		35,285	12,830	19,575	9,776	200,886
2639	14,050	61,600	900	21,000		35,285	12,830	19,575	9,776	175,016
2627	19,950	56,600	900	21,000		35,285	12,830	19,575	9,776	175,916
2636	13,770	50,300	900	21,000		35,285	12,830	19,575	9,776	163,436
2633	13,200	61,600	900	19,000		35,285	12,830	19,575	9,776	172,166
2597	94,470	67,150	900	2,000		35,285	12,830	19,575	9,776	241,986
2637	13,570	61,100	900	2,000		35,285	12,830	19,575	9,776	155,036
2490	14,520	60,250	900	2,000		35,285	12,830	19,575	9,776	155,136
2548	13,720	50,300	900	9,000		35,285	12,830	19,575	9,776	151,386
2571	13,470	61,450	900	21,000		35,285	12,830	19,575	9,776	174,286
2477	16,235	61,450	900	29,500		35,285	12,830	19,575	9,776	185,551
2549	20,970	81,600	900	2,000		35,285	12,830	19,575	9,776	182,936
2582	14,620	46,100	900	21,000		35,285	12,830	19,575	9,776	160,086
2543	60,870	88,350	900	21,000		35,285	12,830	19,575	9,776	248,586
2546	14,470	46,600	900	19,000		35,285	12,830	19,575	9,776	158,436
2547	13,720	30,300	900	21,000		35,285	12,830	19,575	9,776	143,386
2068	13,070	14,150	900	9,000		35,285	12,830	19,575	9,776	114,586
2510	14,870	29,850	900	21,000		35,285	12,830	19,575	9,776	144,086
2511	17,070	30,800	900	2,000		35,285	12,830	19,575	9,776	128,236
2523	16,620	30,300	900	2,000		35,285	12,830	19,575	9,776	127,286
2527	16,625	47,650	900	2,000		35,285	12,830	19,575	9,776	144,641
2528	16,050	52,650	900	2,000		35,285	12,830	19,575	9,776	149,066
2530	6,810	24,850	900	26,000		35,285	12,830	19,575	9,776	136,026
2532	14,025	29,300	900	3,500		35,285	12,830	19,575	9,776	125,191
2536	127,610	24,000	900	2,000		35,285	12,830	19,575	9,776	231,976
2539	22,570	30,300	750	22570	10300	35,285	12,830	19,575	9,776	163,956
2544	7,750	29,150	900	19,000		35,285	12,830	19,575	9,776	134,266
2545	7,520	9,300	900	19,000		35,285	12,830	19,575	9,776	114,186
2547a	13,720	30,300	900	12,000		35,285	12,830	19,575	9,776	134,386
2547b	7,520	9,300	900	9,000		35,285	12,830	19,575	9,776	104,186
2566	93,650	30,300	900	9,000		35,285	12,830	19,575	9,776	211,316
2567	15,670	51,750	900	19,000		35,285	12,830	19,575	9,776	164,786
2570	15,860	39,600	900	19,000		35,285	12,830	19,575	9,776	152,826
2574	15,600	42,100	900	28,000		35,285	12,830	19,575	9,776	164,066
2575	95,720	77,650	900	19,000		35,285	12,830	19,575	9,776	270,736
2584	15,670	51,750	900	2,000		35,285	12,830	19,575	9,776	147,786
2586	14,710	42,100	900	3,500		35,285	12,830	19,575	9,776	138,676
verage	27,464	45,547	891	13,137	10,150	34,477	12,830	19,575	9,776	173,846
a	16%	26%	1%	8%	6%	20%	7%	11%	6%	100%

Malaria in Pregnancy.

Patient Identification Number	Total Cost of drugs	Total Cost of sundries	Total Stationery Cost	Cost Lab Test	Cost Ultra Sound Scan	Personnel Cost	Adminstration Cost	Annualised value of medical equipment per patient	Annualised value of building per condition	Cost for each Malaria in pregnancy
1741	17870	19,650	750	2000		25,830	12,830	12,071	5,860	96,861
1890	10540	-	750	2000		25,830	12,830	12,071	5,860	69,881
1912	15540	24,650	750	2000	10,000	25,830	12,830	12,071	5,860	109,531
1914	21520	20,400	750	2000		25,830	12,830	12,071	5,860	101,261
1920	20700	43,300	750	2000		25,830	12,830	12,071	5,860	123,341
1948	13200	20,550	750	2000		25,830	12,830	12,071	5,860	93,091
1960	23920	20,400	750	2000		25,830	12,830	12,071	5,860	103,661
2000	25670	20,350	750	2000		25,830	12,830	12,071	5,860	105,361
2084	12520	-	300	2000		25,830	12,830	12,071	5,860	71,411
2642	17725	19,650	750	2000		25,830	12,830	12,071	5,860	96,716
2784	15520	1,500	600	2000		25,830	12,830	12,071	5,860	76,211
2858	17920	4,500	600	9000		25,830	12,830	12,071	5,860	88,611
2896	5220	-	600	2000		25,830	12,830	12,071	5,860	64,411
2900	26020	8,800	750	2000		25,830	12,830	12,071	5,860	94,161
2910	8510	8,800	750	3500		25,830	12,830	12,071	5,860	78,151
2925	60270	-	900	10500		25,830	12,830	12,071	5,860	128,261
2953	11110	9,500	900	3500		25,830	12,830	12,071	5,860	81,601
2965	5110	9,350	900	2000		25,830	12,830	12,071	5,860	73,951
2666	17920	19,350	900	3500		25,830	12,830	12,071	5,860	98,261
2690	13635	19000	750	2000		25,830	12,830	12,071	5,860	91,976
2694	21670	32350	750	2000		25,830	12,830	12,071	5,860	113,361
2696	16995	19300	750	2000		25,830	12,830	12,071	5,860	95,636
2698	7360	1500	450	2000		25,830	12,830	12,071	5,860	67,901
2715	12610	24300	750	2000		25,830	12,830	12,071	5,860	96,251
2737	17910	13600	900	3500		25,830	12,830	12,071	5,860	92,501
2850	10860	1050	600	2000		25,830	12,830	12,071	5,860	71,101
3006	16720	9850	900	4000		25,830	12,830	12,071	5,860	88,061
2621	4510	300	750	2000		25,830	12,830	12,071	5,860	64,151
Average	16,753	13,286	734	2,839	10,000	25,830	12,830	12,071	5,860	90,560
	18%	15%	1%	3%	11%	29%	14%	13%	6%	100%

5 in Pregnancy

patient identifica n umber	Total Cost of drugs	Total Cost of sundries	Total Stationery Cost	Cost Lab Test	Cost Ultra Sound Scan	Personnel Cost	Adminstration Cost	Annualised value of medical equipment per condition or patient	Annualised value of building per condition	Cost for each ISS in pregnancy
2769	11,575		900	9,000		23,684	12,830	12,071	5,860	75,920
2744	670		750	7,000		23,684	12,830	12,071	5,860	62,865
2772	670		750	7,000		23,684	12,830	12,071	5,860	62,865
2753	670		750	7,000		23,684	12,830	12,071	5,860	62,865
1981	1,270		900	9,000		23,684	12,830	12,071	5,860	65,615
1907	6,670		750	7,000		23,684	12,830	12,071	5,860	68,865
1895	16,520	39,200	750	7,000		23,684	12,830	12,071	5,860	117,915
2047	15,270	30,000	750	7,000		23,684	12,830	12,071	5,860	107,465
2045	250	500	750	7,000	10,000	23,684	12,830	12,071	5,860	72,945
1996	16,060	350	900	3,500		23,684	12,830	12,071	5,860	75,255
1944	6,445		1,050	9,000	10,000	23,684	12,830	12,071	5,860	80,940
1943	51,870	19,800	900	7,000		23,684	12,830	12,071	5,860	134,015
1991	18,200	37,000	1,050	25,000		23,684	12,830	12,071	5,860	135,695
1923	16,800	34,800	750	7,000		23,684	12,830	12,071	5,860	113,795
2804	35,970	53,900	900	9,000		23,684	12,830	12,071	5,860	154,215
2644	12,670	40,050	750	2,000		23,684	12,830	12,071	5,860	109,915
2458	18,360	7,000	900	9,000		23,684	12,830	12,071	5,860	89,705
2478	2,295		900	9,000		23,684	12,830	12,071	5,860	66,640
2514	670		450	670	450	23,684	12,830	12,071	5,860	56,685
2426	85,520	1,400	900	9,000	10,000	23,684	12,830	12,071	5,860	161,265
2418	7,100	18,000	900	9,000		23,684	12,830	12,071	5,860	89,445
2072	10,260		600	2,000		23,684	12,830	12,071	5,860	67,305
1355	7,470		900	10,500		23,684	12,830	12,071	5,860	73,315
1791	6,370		750	3,500		23,684	12,830	12,071	5,860	65,065
1979	1,545	3,800	750	7,000		23,684	12,830	12,071	5,860	67,540
2211	3,520	26,000	900	21,000		23,684	12,830	12,071	5,860	105,865
average	13,642	22,271	819	8,083	7,613	23,684	12,830	12,071	5,860	106,874
percentage	13%	21%	1%	8%	7%	22%	12%	11%	5%	100%

anaemia.

patient identifica on umber	Total Cost of drugs	Total Cost of sundries	Total Stationery Cost	Cost Lab Test	Cost Ultra Sound Scan	Personnel Cost	Adminstration Cost	Annualised value of medical equipment per condition or disease	Annualised value of building per condition	Cost for each Anaemia
2211	3520	26000	900	21000		25,830	12,830	12,071	5,860	108,011
2520	9500	14800	750	19000		25,830	12,830	12,071	5,860	100,641
2500	12270	47200	750	19000		25,830	12,830	12,071	5,860	135,811
2492	84960	25500	900	21000		25,830	12,830	12,071	5,860	188,951
2466	3570	1650	750	19000		25,830	12,830	12,071	5,860	81,561
2590	12200	16100	900	21000		25,830	12,830	12,071	5,860	106,791
0003	10590	24500	900	21000		25,830	12,830	12,071	5,860	113,581
1715	2180	19150	750	4000		25,830	12,830	12,071	5,860	82,671
1871	84270	24500	900	25000		25,830	12,830	12,071	5,860	191,261
2097	5350	23350	900	27500		25,830	12,830	12,071	5,860	113,691
2185	12770	0	750	21000		25,830	12,830	12,071	5,860	91,111
2148	950	1950	600	19000		25,830	12,830	12,071	5,860	79,091
erage	20,178	18,725	813	19,792		25,830	12,830	12,071	5,860	116,097
e	17%	16%	1%	17%	0%	22%	11%	10%	5%	100%

tovu Hospital.

Caesarian Section.

patient identificat n umber	Total Cost of drugs	Total Cost of sundries	Total Stationery Cost	Cost Lab Test	Cost Ultra Sound Scan	Personnel Cost	Adminstration Cost	Annualised value of medical equipment per condition or disease	Annualised value of building per condition	Cost for each Caesarian Section
103	62,272	9,090	300	-	-	42,255	15,380	29,356	15,260	173,913
110	89,933	14,692	450	-	-	42,255	15,380	29,356	15,260	207,326
119	65,947	8,280	600	-	-	42,255	15,380	29,356	15,260	177,078
124	56,072	5,353	750	-	-	42,255	15,380	29,356	15,260	164,426
125	56,072	3,170	300	-	-	42,255	15,380	29,356	15,260	161,793
131	58,142	5,303	450	-	-	42,255	15,380	29,356	15,260	166,146
143	44,858	12,961	750	-	-	42,255	15,380	29,356	15,260	160,820
146	130,883	30,334	600	-	-	42,255	15,380	29,356	15,260	264,068
155	129,623	9,160	750	7,000	-	42,255	15,380	29,356	15,260	248,784
157	75,283	134,220	450	18,000	-	42,255	15,380	29,356	15,260	330,204
160	165,355	41,406	600	-	-	42,255	15,380	29,356	15,260	309,612
165	154,185	6,838	450	-	-	42,255	15,380	29,356	15,260	263,724
176	86,505	1,612	450	-	-	42,255	15,380	29,356	15,260	190,818
177	88,583	1,170	150	-	-	42,255	15,380	29,356	15,260	192,154
180	78,633	5,722	450	-	-	42,255	15,380	29,356	15,260	187,056
188	75,983	5,970	1,050	-	-	42,255	15,380	29,356	15,260	185,254
189	92,633	4,937	450	-	-	42,255	15,380	29,356	15,260	200,271
210	120,800	10,562	450	-	-	42,255	15,380	29,356	15,260	234,063
213	89,000	6,050	450	-	-	42,255	15,380	29,356	15,260	197,751
280	93,550	10,464	630	-	-	42,255	15,380	29,356	15,260	206,895
401	87,638	20,759	600	-	-	42,255	15,380	29,356	15,260	211,248
423	42,753	3,944	300	-	-	42,255	15,380	29,356	15,260	149,248
428	63,347	2,180	900	-	-	42,255	15,380	29,356	15,260	168,678
442	82,158	6,342	600	-	-	42,255	15,380	29,356	15,260	191,351
444	77,158	36,000	450	-	-	42,255	15,380	29,356	15,260	215,859
450	58,350	12,263	450	-	-	42,255	15,380	29,356	15,260	173,314
454	85,900	422	150	-	-	42,255	15,380	29,356	15,260	188,723
456	75,947	10,556	300	-	-	42,255	15,380	29,356	15,260	189,054
459	92,058	7,483	450	-	-	42,255	15,380	29,356	15,260	202,242
460	38,895	29,155	1,050	-	-	42,255	15,380	29,356	15,260	171,351
484	41,347	7,012	450	-	-	42,255	15,380	29,356	15,260	151,060
489	63,347	10,996	1,530	-	-	42,255	15,380	29,356	15,260	178,124
499	78,550	13,178	300	-	-	42,255	15,380	29,356	15,260	194,279
502	92,158	17,834	300	-	-	42,255	15,380	29,356	15,260	212,543
503	90,773	36,247	900	-	-	42,255	15,380	29,356	15,260	230,171
504	110,747	11,532	450	-	-	42,255	15,380	29,356	15,260	224,980
524	63,472	34,636	300	-	-	42,255	15,380	29,356	15,260	200,659
558	60,783	5,130	450	-	-	42,255	15,380	29,356	15,260	168,614
716	93,141	10,677	300	12,000	-	42,255	15,380	29,356	15,260	218,369
888	85,203	5,160	450	-	-	42,255	15,380	29,356	15,260	193,064
961	90,275	2,160	300	12,000	-	42,255	15,380	29,356	15,260	206,986
1034	101,722	35,228	450	-	-	42,255	15,380	29,356	15,260	239,651
1047	81,108	4,848	1,350	-	-	42,255	15,380	29,356	15,260	189,557
1169	94,853	11,911	450	12,000	-	42,255	15,380	29,356	15,260	221,465
1172	100,641	14,707	600	3,000	-	42,255	15,380	29,356	15,260	221,199
1175	95,153	1,655	450	-	-	42,255	15,380	29,356	15,260	199,509
1185	60,498	16,842	900	-	-	42,255	15,380	29,356	15,260	180,491
1185	60,947	8,430	600	-	-	42,255	15,380	29,356	15,260	172,228
1316	69,745	11,997	600	-	-	42,255	15,380	29,356	15,260	184,593
1320	59,132	2,800	450	-	-	42,255	15,380	29,356	15,260	164,633

Caesarian Section.

Patient Identification Number	Total Cost of drugs	Total Cost of sundries	Total Stationery Cost	Cost Lab Test	Cost Ultra Sound Scan	Personnel Cost	Administration Cost	Annualised value of medical equipment per condition or disease	Annualised value of building per condition	Cost for each Caesarian Section
1330	137,921	12,535	600	-	-	42,255	15,380	29,356	15,260	253,307
1334	85,872	15,000	300	-	-	42,255	15,380	29,356	15,260	203,423
1335	74,347	8,361	1,050	-	-	42,255	15,380	29,356	15,260	186,009
1336	59,042	4,493	600	-	-	42,255	15,380	29,356	15,260	166,386
1336	59,042	13,000	900	-	-	42,255	15,380	29,356	15,260	175,193
1340	74,726	35,002	150	-	-	42,255	15,380	29,356	15,260	212,128
1340	74,726	24,013	1,500	-	-	42,255	15,380	29,356	15,260	202,490
1352	94,893	2,622	300	-	-	42,255	15,380	29,356	15,260	200,066
1355	100,433	8,384	1,200	-	-	42,255	15,380	29,356	15,260	212,268
1377	112,866	6,294	450	3,000	-	42,255	15,380	29,356	15,260	224,861
1382	78,822	44,059	900	-	-	42,255	15,380	29,356	15,260	226,032
1395	100,433	11,560	900	12,000	-	42,255	15,380	29,356	15,260	227,144
1512	95,641	10,923	450	-	-	42,255	15,380	29,356	15,260	209,265
1530	116,180	8,902	300	-	-	42,255	15,380	29,356	15,260	227,633
1558	89,013	20,888	750	16,000	-	42,255	15,380	29,356	15,260	228,902
1567	92,038	5,498	300	-	-	42,255	15,380	29,356	15,260	200,087
1573	138,525	2,260	450	-	-	42,255	15,380	29,356	15,260	243,486
1574	83,447	24,506	600	-	-	42,255	15,380	29,356	15,260	210,804
1578	70,797	17,943	600	-	-	42,255	15,380	29,356	15,260	191,592
1627	83,178	36,416	300	-	-	42,255	15,380	29,356	15,260	222,145
1634	102,533	10,932	300	-	-	42,255	15,380	29,356	15,260	216,016
1646	88,893	14,702	750	-	-	42,255	15,380	29,356	15,260	206,596
1659	81,413	3,168	300	-	-	42,255	15,380	29,356	15,260	187,130
1660	97,283	18,131	300	12,000	-	42,255	15,380	29,356	15,260	229,965
1673	110,285	9,562	750	-	-	42,255	15,380	29,356	15,260	222,848
1688	116,583	116,583	116,583	7,000	-	42,255	15,380	29,356	15,260	459,000
1694	78,155	22,390	450	-	-	42,255	15,380	29,356	15,260	203,246
1701	85,253	2,204	300	-	-	42,255	15,380	29,356	15,260	190,008
1701	86,667	110,792	450	-	-	42,255	15,380	29,356	15,260	300,160
1707	163,737	16,907	1,350	-	-	42,255	15,380	29,356	15,260	284,244
1708	163,950	19,435	450	12,000	-	42,255	15,380	29,356	15,260	298,086
1710	85,433	1,265	300	-	-	42,255	15,380	29,356	15,260	189,249
1718	60,823	6,736	450	-	-	42,255	15,380	29,356	15,260	170,260
1721	89,134	37,120	450	-	-	42,255	15,380	29,356	15,260	228,955
1801	103,025	8,532	750	12,000	-	42,255	15,380	29,356	15,260	226,557
1806	179,150	5,892	780	12,000	-	42,255	15,380	29,356	15,260	300,073
1832	134,450	15,681	450	-	-	42,255	15,380	29,356	15,260	252,832
1833	85,703	8,272	600	-	-	42,255	15,380	29,356	15,260	196,826
2005	49,772	3,247	480	-	-	42,255	15,380	29,356	15,260	155,750
2013	108,467	5,067	600	-	-	42,255	15,380	29,356	15,260	216,385
2032	59,948	31,361	600	-	-	42,255	15,380	29,356	15,260	194,160
2033	67,348	54,096	450	-	-	42,255	15,380	29,356	15,260	224,145
2063	56,172	7,158	450	-	-	42,255	15,380	29,356	15,260	166,031
2069	91,250	7,552	630	-	-	42,255	15,380	29,356	15,260	201,683
2084	72,568	18,404	300	-	-	42,255	15,380	29,356	15,260	193,523
2088	67,344	9,320	150	-	-	42,255	15,380	29,356	15,260	179,065
2091	58,547	18,954	750	-	-	42,255	15,380	29,356	15,260	180,502
2098	91,640	16,763	750	-	-	42,255	15,380	29,356	15,260	211,404
2356	69,683	16,640	600	-	-	42,255	15,380	29,356	15,260	189,174
2357	46,711	2,644	300	-	-	42,255	15,380	29,356	15,260	151,906
2362	61,147	17,592	450	-	-	42,255	15,380	29,356	15,260	181,440
2380	80,872	4,935	600	-	-	42,255	15,380	29,356	15,260	188,658
2382	78,472	6,070	450	-	-	42,255	15,380	29,356	15,260	187,243
2398	56,083	3,910	600	-	-	42,255	15,380	29,356	15,260	162,844
2680	79,761	26,947	450	-	-	42,255	15,380	29,356	15,260	209,409
2817	42,558	5,102	150	-	-	42,255	15,380	29,356	15,260	150,061
2828	82,923	1,270	600	-	-	42,255	15,380	29,356	15,260	187,044
2876	82,033	12,314	1,200	12,000	-	42,255	15,380	29,356	15,260	209,798
2916	96,620	11,200	600	-	-	42,255	15,380	29,356	15,260	210,671
2916	96,620	9,666	600	-	-	42,255	15,380	29,356	15,260	209,137
2925	222,700	44,184	300	-	-	42,255	15,380	29,356	15,260	369,435
3158	58,647	11,794	600	-	-	42,255	15,380	29,356	15,260	173,292
3505	55,872	10,003	480	-	-	42,255	15,380	29,356	15,260	168,606
1370	96,163	3,922	600	3,000	-	42,255	15,380	29,356	15,260	205,936
Age	86,635	15,969	1,574	1,460	-	42,255	15,380	29,356	15,260	207,890
	42%	8%	1%	1%	0%	20%	7%	14%	7%	100%

Normal Delivery.

Patient Identification Number	Total Cost of drugs	Total Cost of sundries	Total Stationery Cost	Cost Lab Test	Cost Ultra Sound Scan	Personnel Cost	Administration Cost	Annualised value of medical equipment per condition or disease	Annualised value of building per condition	Cost for each Normal Delivery
36	45,270	660	150	0	0	17,870	15,380	10,545	9,860	99,735
39	45,540	1,390	300	0	0	17,870	15,380	10,545	9,860	100,885
78	45,270	3,234	150	0	0	17,870	15,380	10,545	9,860	102,309
100	5,770	4,560	600	0	0	17,870	15,380	10,545	9,860	64,585
101	18,270	3,500	150	0	0	17,870	15,380	10,545	9,860	75,575
112	5,270	4,470	750	0	0	17,870	15,380	10,545	9,860	64,145
113	5,270	10,809	450	0	0	17,870	15,380	10,545	9,860	70,184
114	557	640	600	0	0	17,870	15,380	10,545	9,860	55,452
115	6,057	1,280	300	0	0	17,870	15,380	10,545	9,860	61,292
117	10,110	3,130	600	0	0	17,870	15,380	10,545	9,860	67,495
118	2,950	10,170	450	0	0	17,870	15,380	10,545	9,860	67,225
133	2,770	4,000	300	0	0	17,870	15,380	10,545	9,860	60,725
134	2,680	812	150	0	0	17,870	15,380	10,545	9,860	57,297
135	19,397	38,238	300	0	0	17,870	15,380	10,545	9,860	111,590
137	2,770	6,400	300	0	0	17,870	15,380	10,545	9,860	63,125
138	13,573	9,312	450	0	0	17,870	15,380	10,545	9,860	76,989
139	2,770	1,822	300	0	0	17,870	15,380	10,545	9,860	58,547
142	2,770	2,000	150	0	0	17,870	15,380	10,545	9,860	58,575
148	2,770	7,287	600	0	0	17,870	15,380	10,545	9,860	64,312
149	4,315	6,750	450	0	0	17,870	15,380	10,545	9,860	65,170
151	5,483	1,265	300	0	0	17,870	15,380	10,545	9,860	60,703
153	5,270	780	450	0	0	17,870	15,380	10,545	9,860	60,155
162	2,770	1,330	150	0	0	17,870	15,380	10,545	9,860	57,905
163	8,270	8,260	600	0	0	17,870	15,380	10,545	9,860	70,785
164	15,843	5,648	750	0	0	17,870	15,380	10,545	9,860	75,896
192	5,270	15,390	150	0	0	17,870	15,380	10,545	9,860	74,465
200	1,080	422	300	0	0	17,870	15,380	10,545	9,860	55,457
400	111,137	19,132	900	0	0	17,870	15,380	10,545	9,860	184,824
500	2,770	1,100	300	0	0	17,870	15,380	10,545	9,860	57,825
501	2,770	1,100	150	0	0	17,870	15,380	10,545	9,860	57,675
509	4,215	3,397	150	0	0	17,870	15,380	10,545	9,860	61,417
521	4,120	1,334	300	0	0	17,870	15,380	10,545	9,860	59,409
523	2,770	390	150	0	0	17,870	15,380	10,545	9,860	56,965
526	2,770	894	300	0	0	17,870	15,380	10,545	9,860	57,618
527	2,770	1,220	300	0	0	17,870	15,380	10,545	9,860	57,945
528	2,770	390	300	0	0	17,870	15,380	10,545	9,860	57,115
539	2,770	1,400	300	0	0	17,870	15,380	10,545	9,860	58,125
543	2,770	14	150	0	0	17,870	15,380	10,545	9,860	56,589
738	2,770	1,737	150	0	0	17,870	15,380	10,545	9,860	58,312
1044	2,770	3,358	300	0	0	17,870	15,380	10,545	9,860	60,083
1074	2,770	600	0	0	0	17,870	15,380	10,545	9,860	57,025
1077	8,772	7,058	450	0	0	17,870	15,380	10,545	9,860	69,935
1088	2,770	4,220	300	0	0	17,870	15,380	10,545	9,860	60,945
1093	3,595	6,600	300	0	0	17,870	15,380	10,545	9,860	64,150
1123	3,085	1,623	150	3000	0	17,870	15,380	10,545	9,860	61,513
1125	2,770	3,000	150	12,000	0	17,870	15,380	10,545	9,860	71,575
1135	50,000	26,472	450	6000	0	17,870	15,380	10,545	9,860	136,577
1733	3,057	6,160	300	0	0	17,870	15,380	10,545	9,860	63,172
1821	5,090	2,220	300	0	0	17,870	15,380	10,545	9,860	61,265
1822	4,270	6,422	150	0	0	17,870	15,380	10,545	9,860	64,497
1832	844	5,000	450	0	0	17,870	15,380	10,545	9,860	59,949
1833	3,147	3,000	300	0	0	17,870	15,380	10,545	9,860	60,102
1834	4,857	1,416	450	0	0	17,870	15,380	10,545	9,860	60,378
2353	30,625	4,215	600	0	0	17,870	15,380	10,545	9,860	89,095
2910	7,636	1,202	150	0	0	17,870	15,380	10,545	9,860	62,643
2918	2,770	3,000	150	0	0	17,870	15,380	10,545	9,860	59,575
2921	2,770	5,220	300	0	0	17,870	15,380	10,545	9,860	61,945
2924	13,375	2,000	150	6000	0	17,870	15,380	10,545	9,860	75,180
2926	15,360	4,638	150	0	0	17,870	15,380	10,545	9,860	73,803
2931	10,270	7,670	750	0	0	17,870	15,380	10,545	9,860	72,345
2933	13,142	3,701	900	0	0	17,870	15,380	10,545	9,860	71,398
2935	2,770	622	150	0	0	17,870	15,380	10,545	9,860	57,197
2936	3,580	1,887	300	0	0	17,870	15,380	10,545	9,860	59,422
3161	467	5,400	0	0	0	17,870	15,380	10,545	9,860	59,522
Page	9,892	4,724	333	422	-	17,870	15,380	10,545	9,860	69,026
	14%	7%	0%	1%	0%	26%	22%	15%	14%	100%

Threatening Abortion.

Patient Identification	Total Cost of drugs	Total Cost of sundries	Total Stationery Cost	Cost Lab Test	Cost Ultra Sound	Personnel Cost	Administration Cost	Annualised value of medical equipment per condition or	Annualised value of building per	Cost for each Threatening Abortion
495	4,229	4,155	300	-	-	17,870	15,380	10,545	9,860	62,339
557	4,770	19,610	300	-	-	17,870	15,380	10,545	9,860	78,335
748	3,300	5,472	300	-	-	17,870	15,380	10,545	9,860	62,726
749	8,850	4,098	150	12,000	-	17,870	15,380	10,545	9,860	78,753
833	5,770	1,000	300	-	-	17,870	15,380	10,545	9,860	60,725
959	9,820	4,123	450	12,000	-	17,870	15,380	10,545	9,860	80,048
1050	29,124	3,589	300	-	-	17,870	15,380	10,545	9,860	86,668
1059	4,794	6,004	150	12,000	-	17,870	15,380	10,545	9,860	76,603
1129	3,870	5,973	300	-	-	17,870	15,380	10,545	9,860	63,798
1176	8,115	8,642	450	-	-	17,870	15,380	10,545	9,860	70,862
1314	20,070	9,402	750	-	-	17,870	15,380	10,545	9,860	83,877
1317	16,483	5,887	600	-	-	17,870	15,380	10,545	9,860	76,624
1597	6,423	5,853	450	-	-	17,870	15,380	10,545	9,860	66,381
1618	7,071	7,687	300	-	-	17,870	15,380	10,545	9,860	68,713
1664	5,524	3,050	300	-	-	17,870	15,380	10,545	9,860	62,529
1683	3,885	37,322	450	-	-	17,870	15,380	10,545	9,860	95,311
1691	10,066	10,243	300	-	-	17,870	15,380	10,545	9,860	74,264
1693	4,809	24,760	300	-	-	17,870	15,380	10,545	9,860	83,524
1787	9,200	2,400	450	-	-	17,870	15,380	10,545	9,860	65,705
1792	18,001	33,644	480	-	-	17,870	15,380	10,545	9,860	105,780
2063	5,496	1,032	450	-	-	17,870	15,380	10,545	9,860	60,633
2099	1,560	34,416	300	-	-	17,870	15,380	10,545	9,860	89,931
2294	5,070	2,900	300	-	-	17,870	15,380	10,545	9,860	61,925
2364	3,390	3,258	150	-	-	17,870	15,380	10,545	9,860	60,453
2390	5,070	830	900	-	-	17,870	15,380	10,545	9,860	60,455
2601	17,616	76,562	600	-	-	17,870	15,380	10,545	9,860	148,433
2641	3,860	1,596	150	-	-	17,870	15,380	10,545	9,860	59,261
2803	13,803	6,648	1,650	-	-	17,870	15,380	10,545	9,860	75,756
2867	2,920	1,422	150	-	-	17,870	15,380	10,545	9,860	58,147
2920	3,870	2,480	450	-	-	17,870	15,380	10,545	9,860	60,455
3083	28,536	12,720	600	-	-	17,870	15,380	10,545	9,860	95,511
3060	5,970	4,944	150	-	-	17,870	15,380	10,545	9,860	64,719
1643	2,700	1,440	150	-	-	17,870	15,380	10,545	9,860	57,945
1201	34,860	46,202	150	-	-	17,870	15,380	10,545	9,860	134,867
2675	7,330	860	600	-	-	17,870	15,380	10,545	9,860	62,445
36	2,424	6,660	450	-	-	17,870	15,380	10,545	9,860	63,189
111	26,530	3,390	300	14,000	-	17,870	15,380	10,545	9,860	97,875
706	3,006	812	450	-	-	17,870	15,380	10,545	9,860	57,922
2997	3,270	812	300	-	-	17,870	15,380	10,545	9,860	58,037
3260	41,476	5,233	300	-	-	17,870	15,380	10,545	9,860	100,664
3608	5,000	2,000	300	-	-	17,870	15,380	10,545	9,860	60,955
1502	3,270	2,390	300	-	-	17,870	15,380	10,545	9,860	59,615
849	270	1,190	300	12,000	-	17,870	15,380	10,545	9,860	67,415
863	3,114	600	300	-	-	17,870	15,380	10,545	9,860	57,669
1668	4,924	6,390	300	-	-	17,870	15,380	10,545	9,860	65,269
Page	9,322	9,549	387	1,378	-	17,870	15,380	10,545	9,860	74,291
	13%	13%	1%	2%	0%	24%	21%	14%	13%	100%

Malaria in Pregnancy.

Patient Identification Number	Total Cost of drugs	Total Cost of sundries	Total Stationery Cost	Cost Lab Test	Cost Ultra Sound Scan	Personnel Cost	Administration Cost	Annualised value of medical equipment per condition or disease	Annualised value of building per condition	Cost for each Malaria in Pregnancy
150	17970	14000	900	6,000	0	31,540	15,380	10,545	9,860	106,195
191	5909	2890	300	9,000	0	31,540	15,380	10,545	9,860	85,424
411	18390	800	300	6,000	0	31,540	15,380	10,545	9,860	92,815
422	43850	9,253	750	6,000	0	31,540	15,380	10,545	9,860	127,178
437	18674	2,907	750	6,000	0	31,540	15,380	10,545	9,860	95,656
570	117890	3,585	600	12,000	0	31,540	15,380	10,545	9,860	201,400
700	17520	2,435	0	12,000	0	31,540	15,380	10,545	9,860	99,280
739	14040	1,279	150	12,000	0	31,540	15,380	10,545	9,860	94,794
943	59610	6,562	300	6,000	0	31,540	15,380	10,545	9,860	139,796
1113	24273	390	600	6,000	0	31,540	15,380	10,545	9,860	98,588
1193	38940	1,660	600	6,000	0	31,540	15,380	10,545	9,860	114,525
1216	18270	5,744	450	6,000	0	31,540	15,380	10,545	9,860	97,788
1220	23275	4,332	750	6,000	0	31,540	15,380	10,545	9,860	101,682
1236	18180	1,206	450	6,000	0	31,540	15,380	10,545	9,860	93,161
1241	18919	11,100	600	12,000	0	31,540	15,380	10,545	9,860	109,944
1309	23862	4,390	150	12,000	0	31,540	15,380	10,545	9,860	107,727
1363	31860	780	450	12,000	0	31,540	15,380	10,545	9,860	112,415
1386	7060	1,334	750	6,000	0	31,540	15,380	10,545	9,860	82,468
1390	15360	2,000	150	12,000	0	31,540	15,380	10,545	9,860	96,835
1523	17730	1,606	450	6,000	0	31,540	15,380	10,545	9,860	93,110
1605	13394	4,162	300	6,000	0	31,540	15,380	10,545	9,860	91,180
1652	4501	10,390	150	6,000	0	31,540	15,380	10,545	9,860	88,366
1661	6233	1,687	300	6,000	0	31,540	15,380	10,545	9,860	81,545
1702	16270	872	300	6,000	0	31,540	15,380	10,545	9,860	90,767
1709	20219	20,460	900	6,000	0	31,540	15,380	10,545	9,860	114,904
1712	19529	3,660	900	12,000	0	31,540	15,380	10,545	9,860	103,414
1729	18550	1,950	600	6,000	0	31,540	15,380	10,545	9,860	94,425
1732	18270	1,580	300	6,000	0	31,540	15,380	10,545	9,860	93,475
1733	18360	1,594	450	6,000	0	31,540	15,380	10,545	9,860	93,729
1735	18270	3,589	600	6,000	0	31,540	15,380	10,545	9,860	95,784
1736	78550	6,027	600	6,000	0	31,540	15,380	10,545	9,860	158,502
1792	17610	1,902	450	6,000	0	31,540	15,380	10,545	9,860	93,286
1819	5340	2,265	150	6,000	0	31,540	15,380	10,545	9,860	81,080
1835	42552	91,040	150	12,000	0	31,540	15,380	10,545	9,860	213,067
1956	69790	4,497	900	6,000	0	31,540	15,380	10,545	9,860	148,512
2014	44956	5,443	1680	6,000	0	31,540	15,380	10,545	9,860	125,404
2017	17610	46,746	600	6,000	0	31,540	15,380	10,545	9,860	138,281
2025	70040	2,334	900	12,000	0	31,540	15,380	10,545	9,860	152,598
2035	17946	33,937	750	12,000	0	31,540	15,380	10,545	9,860	131,958
2041	31110	12,730	750		0	31,540	15,380	10,545	9,860	111,915
2062	4427,384	10,280	450	6,000	0	31,540	15,380	10,545	9,860	88,482
2068	19505	5,360	450	6,000	0	31,540	15,380	10,545	9,860	98,640
2072	17706	30,765	600	6,000	0	31,540	15,380	10,545	9,860	122,396
Average	26,566	8,873	527	7,643	-	31,540	15,380	10,545	9,860	110,756
%	24%	8%	0%	7%	0%	28%	14%	10%	9%	100%

vacuations.

atient entificat umber	Lab -Total cost per test	X-Ray total cost per radiography	Ultra -Sound Scan total cost per scan	Personnel Cost	Administration Cost	Annualised value of medical equipment per condition or disease	Annualised value of building per condition	Cost for each Evacuations
346	12000			17,870	15,380	10,545	9,860	65,655
391	12000			17,870	15,380	10,545	9,860	65,655
467	12000			17,870	15,380	10,545	9,860	65,655
774	12,000			17,870	15,380	10,545	9,860	65,655
979	12,000			17,870	15,380	10,545	9,860	65,655
1002	17,000		18000	17,870	15,380	10,545	9,860	88,655
1026	12,000		18000	17,870	15,380	10,545	9,860	83,655
1192	15,000			17,870	15,380	10,545	9,860	68,655
1194	12,000			17,870	15,380	10,545	9,860	65,655
1209	12,000			17,870	15,380	10,545	9,860	65,655
1212	12,000			17,870	15,380	10,545	9,860	65,655
1305	12,000		18000	17,870	15,380	10,545	9,860	83,655
1311	16,000			17,870	15,380	10,545	9,860	69,655
1315	17,000		18000	17,870	15,380	10,545	9,860	88,655
1339	12,000	12000		17,870	15,380	10,545	9,860	77,655
1391	12,000			17,870	15,380	10,545	9,860	65,655
1399	12,000			17,870	15,380	10,545	9,860	65,655
1531	12,000			17,870	15,380	10,545	9,860	65,655
1558	12,000			17,870	15,380	10,545	9,860	65,655
1667	12,000			17,870	15,380	10,545	9,860	65,655
1771	12,000			17,870	15,380	10,545	9,860	65,655
1884	14,000			17,870	15,380	10,545	9,860	67,655
1906	12,000			17,870	15,380	10,545	9,860	65,655
1916	12,000		18000	17,870	15,380	10,545	9,860	83,655
2066	12,000			17,870	15,380	10,545	9,860	65,655
2087	12,000			17,870	15,380	10,545	9,860	65,655
2093	12,000			17,870	15,380	10,545	9,860	65,655
2243	12,000			17,870	15,380	10,545	9,860	65,655
2315	12,000			17,870	15,380	10,545	9,860	65,655
2319	3,000			17,870	15,380	10,545	9,860	56,655
2325	12,000		18000	17,870	15,380	10,545	9,860	83,655
2332	9,000	12000		17,870	15,380	10,545	9,860	74,655
2667	12,000			17,870	15,380	10,545	9,860	65,655
2740	12,000			17,870	15,380	10,545	9,860	65,655
2741	12,000		18000	17,870	15,380	10,545	9,860	83,655
2801	12,000			17,870	15,380	10,545	9,860	65,655
2827	12,000			17,870	15,380	10,545	9,860	65,655
2835	12,000	12,000		17,870	15,380	10,545	9,860	77,655
1506	12,000			50,000	15,380	10,545	9,860	97,785
1514	12,000	12,001	12,002	12,003	12,004	12,005	12,006	84,021
verage	12,175	12,000	17,250	18,527	15,296	10,582	9,913	95,743
ie	13%	13%	18%	19%	16%	11%	10%	100%

**timation of personnel cost used to do examinations in support department for cases sent from
atiernity ward**

upport Departments	Cadre	Gross monthly salary	Hours worked in a month	Average time taken to do an examination	Cost of staff used to conduct a delivery
laboratory	Laboratory assistant	383,000	160	0.9	1,661
	laboratory attendant	197,000	160		
	Total	580,000	320		
ltra sound scan	Midwife	343,300	160	1	2,145.63

timation of personnel cost used to conduct one Normal Delivery Matiernity ward

cadre	Gross monthly salary	Hours worked in a month	Average time taken to conduct a normal delivery	Cost of staff used to conduct a delivery
egistered midwife	442,345	160	6	12,739
lidwife	343,300	160		
urse	233,500	160		
otal	1,019,145	480	6	12,739

timation of personnel cost used to conduct one Caesarian Section in Matiernity ward.

cadre	Gross monthly salary	Hours worked in a month	Average time taken to conduct one operation	Cost of staff used to conduct an operation
urgeon	1,537,400	160	8.40	31,478
nesthetic	462,540	160		
heatre attendant	332,300	160		
rolled nurse	332,850	160		
ounselor	332,850	160		
otal	2,997,940	800	8.40	31,478
	599,588	160	3,747	31,478

Estimation of personnel cost used to do examinations in support department for cases sent from Maternity ward

Support Departments	Cadre	Gross monthly salary	Hours worked in a month	Average time taken to do an examination	Cost of staff used to conduct a delivery
Laboratory	Laboratory assistant	383,000	160	0.9	1,661
	Laboratory attendant	197,000	160		
	Total	580,000	320		
Ultrasonography	Midwife	343,300	160	1	2,145.63

Estimation of personnel cost used to conduct one Normal Delivery Maternity ward

Cadre	Gross monthly salary	Hours worked in a month	Average time taken to conduct a normal delivery	Cost of staff used to conduct a delivery
Registered midwife	442,345	160	6	12,739
Midwife	343,300	160		
Nurse	233,500	160		
Total	1,019,145	480	6	12,739

Estimation of personnel cost used to conduct one Caesarian Section in Maternity ward.

Cadre	Gross monthly salary	Hours worked in a month	Average time taken to conduct one operation	Cost of staff used to conduct an operation
Surgeon	1,537,400	160	8.40	31,478
Anesthetic	462,540	160		
Operating room attendant	332,300	160		
Controlled nurse	332,850	160		
Dispenser	332,850	160		
Total	2,997,940	800	8.40	31,478
	599,588	160	3,747	31,478

Estimation of personnel cost used to manage ISS in pregnancy in Maternity ward.

Staff	Gross monthly salary	Hours worked in a month	Average time taken to treat ISS in pregnancy in Maternity ward	Cost of staff used to treat ISS in pregnancy
Midwife	343,300	160	5	22,023
Nurse	233,500	160		
Doctor	1,537,400	160		
Total	2,114,200	480	5	22,023

The personnel cost used to manage ISS in pregnancy is the same for Anaemia and Malaria in pregnancy on an average duration of 3 days. Total personnel cost that contribute to managing the ISS in pregnancy include staff who attended to a patient in the support departments (Laboratory, Pharmacy & Maternity ward) .

The administrative cost include personnel cost and expenses in the respective hospitals.

Annualised cost of buildings in which patients received care and treatment.

COST CENTRE	Building	Total Replacement cost	Useful years	Annualisation factor	Total annualised value	Number of diagnosis, tests, or conditions/ diseases	Annualised value per diagnosis, tests, or conditions/ diseases.
MATERNITY	Building	148,820,000	30	19.6	7,592,857		
	Verandah	3,193,500	30	19.6	162,934		
	Pavement	3,150,000	30	19.6	160,714		
	Maternity Toilet	4,028,000	30	19.6	205,510		
	Verandah	1,140,000	30	19.6	58,163		
					8,180,179	1,544	5,298
PHARMACY	Pharmacy building	53,305,000	30	19.6	2,719,643	7,553	360
LABORATORY	Laboratory building	48,300,000	30	19.6	2,464,286		
					2,464,286	12,220	202
THEATRE	Theatre building	51,543,000	30	19.6	2,629,745		
	Theatre extension(paved)	17,259,000	30	19.6	880,561		
					3,510,306	896	3,916

The same approach was used to compute for each hospital

Annualised cost of medical equipment which were used to provide treatment

Condition	Equipment used	Quantity	Value of equipment	Rate	Economic life	Annualisation factor	Annualised values
Normal delivery	Delivery beds	3	1000000	3,000,000	10	8.53	351,700
	Delivery packs	5	800000	4,000,000	5	4.58	873,362
	Cheatle forceps	1	20000	20,000	7	6.23	3,210
	Scissors	1	10000	10,000	1	0.97	10,309
	Weighing Scale Baby	2	230000	460,000	5	4.58	100,437
	Drums	9	270000	2,430,000	10	8.53	284,877
	Oxygen Cylinder & Regulator	1	300000	300,000	10	8.53	35,170
	Hand Washing Basin Stand	1	400000	400,000	7	6.23	64,205
	Tables	8	60000	480,000	5	4.58	104,803
	Trolley	3	450000	1,350,000	7	6.23	216,693
	Drip Stand	6	150000	900,000	3	2.83	318,021
	Sterilizer Boiler	1	56000	56,000	7	6.23	8,989
	Examination Couch	3	50000	150,000	7	6.23	24,077
	Ward Screen	3	370000	1,110,000	3	2.83	392,226
	Big buckets	11	8000	88,000	1	0.97	90,722
	Small buckets	3	4000	12,000	1	0.97	12,371
	Lockers	32	70000	2,240,000	3	2.83	791,519
	Gallipots	6	10000	60,000	7	6.23	9,631
	Hand towels	40	5000	200,000	1	0.97	206,186
	Beds	37	450000	16,650,000	7	6.23	2,672,552
	Baby coats	9	40000	360,000	7	6.23	57,785
	Trays	4	10000	40,000	3	2.83	14,134
	Cupboards	6	60000	360,000	3	2.83	127,208
	Wall clock	2	15000	30,000	1	0.97	30,928

Annualised cost of medical equipment which were used to provide treatment.

sease	Equipment used	Quantity	Value of equipment	Rate	Economic life	Annualisation factor	Annualised values
Iss in pregnance							
	Hand Washing Basin	1	400000	400,000	7	6.23	64,205
	Tables	8	60000	480,000	5	4.58	104,803
	Sterilizer Boiler	1	56000	56,000	7	6.23	8,989
	Ward Screen	3	370000	1,110,000	3	2.83	392,226
	Hand towels	40	5000	200,000	1	0.97	206,186
	Beds	37	450,000	16,650,000	7	6.23	2,672,552
	Trays	4	10000	40,000	3	2.83	14,134
	Cupboards	6	60000	360,000	3	2.83	127,208
	Wall clock	2	15000	30,000	1	0.97	30,928

Table of F-statistics P=0.05

t-statistics
F-statistics with other P-values: P=0.01 | P=0.001
Chi-square statistics

df2\df1	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	22	24	26	28	30	35	40	45	50	60	70	80	100	200	500	1000	>1000	df1\df2	
3	10.13	9.55	9.28	9.12	9.01	8.94	8.89	8.85	8.81	8.79	8.76	8.74	8.73	8.71	8.70	8.69	8.68	8.67	8.67	8.66	8.65	8.64	8.63	8.62	8.62	8.60	8.59	8.59	8.58	8.57	8.57	8.56	8.55	8.54	8.53	8.53	8.54	3	
4	7.71	6.94	6.59	6.39	6.26	6.16	6.09	6.04	6.00	5.96	5.94	5.91	5.89	5.87	5.86	5.84	5.83	5.82	5.81	5.80	5.79	5.77	5.76	5.75	5.75	5.73	5.72	5.71	5.70	5.69	5.68	5.67	5.66	5.65	5.64	5.63	5.63	5.63	4
5	6.61	5.79	5.41	5.19	5.05	4.95	4.88	4.82	4.77	4.74	4.70	4.68	4.66	4.64	4.62	4.60	4.59	4.58	4.57	4.56	4.54	4.53	4.52	4.50	4.50	4.48	4.46	4.45	4.44	4.43	4.42	4.42	4.41	4.39	4.37	4.37	4.36	5	
6	5.99	5.14	4.76	4.53	4.39	4.28	4.21	4.15	4.10	4.06	4.03	4.00	3.98	3.96	3.94	3.92	3.91	3.90	3.88	3.87	3.86	3.84	3.83	3.82	3.81	3.79	3.77	3.76	3.75	3.74	3.73	3.72	3.71	3.69	3.68	3.67	3.67	6	
7	5.59	4.74	4.35	4.12	3.97	3.87	3.79	3.73	3.68	3.64	3.60	3.57	3.55	3.53	3.51	3.49	3.48	3.47	3.46	3.44	3.43	3.41	3.40	3.39	3.38	3.36	3.34	3.33	3.32	3.30	3.29	3.27	3.25	3.24	3.23	3.23	7		
8	5.32	4.46	4.07	3.84	3.69	3.58	3.50	3.44	3.39	3.35	3.31	3.28	3.26	3.24	3.22	3.20	3.19	3.17	3.16	3.15	3.13	3.12	3.10	3.09	3.08	3.06	3.04	3.03	3.02	3.01	2.99	2.99	2.97	2.95	2.94	2.93	8		
9	5.12	4.26	3.86	3.63	3.48	3.37	3.29	3.23	3.18	3.14	3.10	3.07	3.05	3.03	3.01	2.99	2.97	2.96	2.95	2.94	2.92	2.90	2.89	2.87	2.86	2.84	2.83	2.81	2.80	2.79	2.78	2.77	2.76	2.73	2.72	2.71	9		
10	4.96	4.10	3.71	3.48	3.33	3.22	3.14	3.07	3.02	2.98	2.94	2.91	2.89	2.86	2.85	2.83	2.81	2.80	2.79	2.77	2.75	2.74	2.72	2.71	2.70	2.68	2.66	2.65	2.64	2.62	2.61	2.60	2.59	2.56	2.55	2.54	2.54	10	
11	4.84	3.98	3.59	3.36	3.20	3.09	3.01	2.95	2.90	2.85	2.82	2.79	2.76	2.74	2.72	2.70	2.69	2.67	2.66	2.65	2.63	2.61	2.59	2.58	2.57	2.55	2.53	2.52	2.51	2.49	2.48	2.47	2.46	2.43	2.42	2.41	2.41	11	
12	4.75	3.89	3.49	3.26	3.11	3.00	2.91	2.85	2.80	2.75	2.72	2.69	2.66	2.64	2.62	2.60	2.58	2.57	2.56	2.54	2.52	2.51	2.49	2.48	2.47	2.44	2.42	2.41	2.40	2.38	2.37	2.36	2.35	2.32	2.31	2.30	2.30	12	
13	4.67	3.81	3.41	3.18	3.03	2.92	2.83	2.77	2.71	2.67	2.63	2.60	2.58	2.55	2.53	2.51	2.50	2.48	2.47	2.46	2.44	2.42	2.41	2.39	2.38	2.36	2.34	2.33	2.31	2.30	2.28	2.27	2.26	2.23	2.22	2.21	2.21	13	
14	4.60	3.74	3.34	3.11	2.96	2.85	2.76	2.70	2.65	2.60	2.57	2.53	2.51	2.48	2.46	2.44	2.43	2.41	2.40	2.39	2.37	2.35	2.33	2.32	2.30	2.28	2.27	2.25	2.24	2.22	2.21	2.20	2.19	2.16	2.14	2.14	14		
15	4.54	3.68	3.29	3.06	2.90	2.79	2.71	2.64	2.59	2.54	2.51	2.48	2.45	2.42	2.40	2.38	2.37	2.35	2.34	2.33	2.31	2.29	2.27	2.26	2.25	2.22	2.20	2.19	2.18	2.16	2.15	2.14	2.12	2.10	2.08	2.07	2.07	15	
16	4.49	3.63	3.24	3.01	2.85	2.74	2.66	2.59	2.54	2.49	2.46	2.42	2.40	2.37	2.35	2.33	2.32	2.30	2.29	2.28	2.25	2.24	2.22	2.21	2.19	2.17	2.15	2.14	2.12	2.11	2.09	2.08	2.07	2.04	2.02	2.02	2.01	16	
17	4.45	3.59	3.20	2.96	2.81	2.70	2.61	2.55	2.49	2.45	2.41	2.38	2.35	2.33	2.31	2.29	2.27	2.26	2.24	2.23	2.21	2.19	2.17	2.16	2.15	2.12	2.10	2.09	2.08	2.06	2.05	2.03	2.02	1.99	1.97	1.97	1.96	17	
18	4.41	3.55	3.16	2.93	2.77	2.66	2.58	2.51	2.46	2.41	2.37	2.34	2.31	2.29	2.27	2.25	2.23	2.22	2.20	2.19	2.17	2.15	2.13	2.12	2.11	2.08	2.06	2.05	2.04	2.02	2.00	1.99	1.98	1.95	1.93	1.92	1.92	18	
19	4.38	3.52	3.13	2.90	2.74	2.63	2.54	2.48	2.42	2.38	2.34	2.31	2.28	2.26	2.23	2.21	2.20	2.18	2.17	2.16	2.13	2.11	2.10	2.08	2.07	2.05	2.03	2.01	2.00	1.98	1.97	1.96	1.94	1.91	1.89	1.88	1.88	19	
20	4.35	3.49	3.10	2.87	2.71	2.60	2.51	2.45	2.39	2.35	2.31	2.28	2.25	2.23	2.20	2.18	2.17	2.15	2.14	2.12	2.10	2.08	2.07	2.05	2.04	2.01	1.99	1.98	1.97	1.95	1.93	1.92	1.91	1.88	1.86	1.85	1.84	20	
22	4.30	3.44	3.05	2.82	2.66	2.55	2.46	2.40	2.34	2.30	2.26	2.23	2.20	2.17	2.15	2.13	2.11	2.10	2.08	2.07	2.05	2.03	2.01	2.00	1.98	1.96	1.94	1.92	1.91	1.89	1.88	1.86	1.85	1.82	1.80	1.79	1.78	22	
24	4.26	3.40	3.01	2.78	2.62	2.51	2.42	2.36	2.30	2.25	2.22	2.18	2.15	2.13	2.11	2.09	2.07	2.05	2.04	2.03	2.00	1.98	1.97	1.95	1.94	1.91	1.89	1.88	1.86	1.84	1.83	1.82	1.80	1.77	1.75	1.74	1.73	24	
26	4.23	3.37	2.98	2.74	2.59	2.47	2.39	2.32	2.27	2.22	2.18	2.15	2.12	2.09	2.07	2.05	2.03	2.02	2.00	1.99	1.97	1.95	1.93	1.91	1.90	1.87	1.85	1.84	1.82	1.80	1.79	1.78	1.76	1.73	1.71	1.70	1.69	26	
28	4.20	3.34	2.95	2.71	2.56	2.45	2.36	2.29	2.24	2.19	2.15	2.12	2.09	2.06	2.04	2.02	2.00	1.99	1.97	1.96	1.93	1.91	1.90	1.88	1.87	1.84	1.82	1.80	1.79	1.77	1.75	1.74	1.73	1.69	1.67	1.66	28		
30	4.17	3.32	2.92	2.69	2.53	2.42	2.33	2.27	2.21	2.16	2.13	2.09	2.06	2.04	2.01	1.99	1.98	1.96	1.95	1.93	1.91	1.89	1.87	1.85	1.84	1.81	1.79	1.77	1.76	1.74	1.72	1.71	1.70	1.66	1.64	1.63	1.62	30	
35	4.12	3.27	2.87	2.64	2.49	2.37	2.29	2.22	2.16	2.11	2.08	2.04	2.01	1.99	1.96	1.94	1.92	1.91	1.89	1.88	1.85	1.83	1.82	1.80	1.79	1.76	1.74	1.72	1.70	1.68	1.66	1.65	1.63	1.60	1.57	1.56	35		
40	4.08	3.23	2.84	2.61	2.45	2.34	2.25	2.18	2.12	2.08	2.04	2.00	1.97	1.95	1.92	1.90	1.89	1.87	1.85	1.84	1.81	1.79	1.77	1.76	1.74	1.72	1.69	1.67	1.66	1.64	1.62	1.61	1.59	1.55	1.53	1.52	40		
45	4.06	3.20	2.81	2.58	2.42	2.31	2.22	2.15	2.10	2.05	2.01	1.97	1.94	1.92	1.89	1.87	1.86	1.84	1.82	1.81	1.78	1.76	1.74	1.73	1.71	1.68	1.66	1.64	1.63	1.60	1.59	1.57	1.55	1.51	1.49	1.48	45		
50	4.03	3.18	2.79	2.56	2.40	2.29	2.20	2.13	2.07	2.03	1.99	1.95	1.92	1.89	1.87	1.85	1.83	1.81	1.80	1.78	1.76	1.74	1.72	1.70	1.69	1.66	1.63	1.61	1.60	1.58	1.56	1.54	1.52	1.48	1.46	1.45	1.44	50	
60	4.00	3.15	2.76	2.53	2.37	2.25	2.17	2.10	2.04	1.99	1.95	1.92	1.89	1.86	1.84	1.82	1.80	1.78	1.76	1.75	1.72	1.70	1.68	1.66	1.65	1.62	1.59	1.57	1.56	1.53	1.52	1.50	1.48	1.44	1.41	1.40	1.39	60	
70	3.98	3.13	2.74	2.50	2.35	2.23	2.14	2.07	2.02	1.97	1.93	1.89	1.86	1.84	1.81	1.79	1.77	1.75	1.74	1.72	1.70	1.67	1.65	1.64	1.62	1.59	1.57	1.55	1.53	1.50	1.49	1.47	1.45	1.40	1.37	1.36	1.35	70	
80	3.96	3.11	2.72	2.49	2.33	2.21	2.13	2.06	2.00	1.95	1.91	1.88	1.84	1.82	1.79	1.77	1.75	1.73	1.72	1.70	1.68	1.65	1.63	1.62	1.60	1.57	1.54	1.52	1.51	1.48	1.46	1.45	1.43	1.38	1.35	1.34	1.33	80	
100	3.94	3.09	2.70	2.46	2.31	2.19	2.10	2.03	1.97	1.93	1.89	1.85	1.82	1.79	1.77	1.75	1.73	1.71	1.69	1.68	1.65	1.63	1.61	1.59	1.57	1.54	1.52	1.49	1.48	1.45	1.43	1.41	1.39	1.34	1.31	1.30	1.28	100	
200	3.89	3.04	2.65	2.42	2.26	2.14	2.06	1.98	1.93	1.88	1.84	1.80	1.77	1.74	1.72	1.69	1.67	1.66	1.64	1.62	1.60	1.57	1.55	1.53	1.52	1.48	1.46	1.43	1.41	1.39	1.36	1.35	1.32	1.26	1.22	1.21	1.19	200	
500	3.86	3.01	2.62	2.39	2.23	2.12	2.03	1.96	1.90	1.85	1.81	1.77	1.74	1.71	1.69	1.66	1.64	1.62	1.61	1.59	1.56	1.54	1.52	1.50	1.48	1.45	1.42	1.40	1.38	1.35	1.32	1.30	1.28	1.21	1.16	1.14	1.12	500	
1000	3.85	3.00	2.61	2.38	2.22	2.11	2.02	1.95	1.89	1.84	1.80	1.76	1.73	1.70	1.68	1.65	1.63	1.61	1.60	1.58	1.55	1.53	1.51	1.49	1.47	1.43	1.41	1.38	1.36	1.33	1.31	1.29	1.26	1.19	1.13	1.11	1.08	1000	
>1000	1.04	3.00	2.61	2.37	2.21	2.10																																	

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1. Tsolmongerel Tsllaajav Consultant for Health facilities costing March 2009.
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