Ndala Hospital

Annual Report 2012

Archdiocese of Tabora, Tanzania

Ndala Hospital

P.O. Box 15

Ndala via Tabora

Tanzania

Tel: +255 784566016 (Medical Officer in Charge)

E-mail: ndalahospital@gmail.com

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General overview of 2012

Staff

The hospital management team underwent some changes by adding two new members. Sr. Georgita Paul (CB) is working as an assistant administrator but is expected to be the hospital administrator soon by next year as the current administrator is finishing her period of stay in Ndala. The 2nd new member of the team is Sr. Ester Muharami (CB) who has joined the team to strengthen on respect of law and legal matters as she has qualifications on law. Therefore the total number of members of the management team rose to be six.
The board of governors met twice for its regular meeting and two other meetings were held due to special concern addressing matters arising from misunderstandings between hospital management team and workers.
Some qualified staff left the hospital, many of them got employment in government sector with the expectation of getting higher terminal benefits, but on the other side new 10 qualified staff were employed on contract basis.
The last foreign doctor - Dr. Robi and his wife Daniela finished their contracts, but Dr. Robi extended his contract for three months more until January 2013. The Tanzanian medical doctor who is finishing his internship training in KCMC is expected to take over the duty of Dr. Robi in the beginning of 2013.

Patients

In general the number of admissions relatively increased compared to last year as well as outpatient attendances.

The number of caesarean sections remained relatively stable last year. The number of fresh still births (SB) increased compared to the last year as well as macerated SB's; this can be caused by delay on arrival on time to hospital.
There were 12 maternal deaths. Most of them caused by uterine rupture, PPH and criminal abortion. There is an increase of minor procedures in the theatre due to increase of motorcycle accidents. The number of total vaccinations decreased by 40% due to failure of vaccine-supply from the district level. This was a problem on national level during the year.
The number of HIV tests has increased by 46% due to active PITC services in the hospital.

Top 5 Causes of Death in Children

- Malaria
- Pneumonia
- Anemia
- Acute diarrhea diseases
- HIV/AIDS

Top 10 Diseases Diagnosed at OPD (Adults)

- Malaria
- Pneumonia
- Anemia
- Minor complains in pregnancy
- Acute diarrhea diseases
- Hypertension
- Peptic ulcers
- Intestinal worms
- Urinary tract infections
- Eye infections

Building/Installation

Within the year a new beautiful new RCH building with enough rooms has been completed. A new operating theatre, which has been started in 2009, is not yet completed by the contractor, but there is some progress, as the installation of some equipment has been done. Two big plastic water tanks were bought by support from EGPAF waiting for installation at the CTC building. The connection of the hospital to the national electricity grid (TANESCO) started in September expecting to be finished in early 2013.

Finance

This year the financial situation remained steady, but the hospital faces a great challenge on getting supplies for essential medicines and other consumables for medical material/items of which the price was raised from time to time. The hospital as a whole is still remaining dependant on funds from abroad and government supports. The petrol station is almost completed, it will serve as an income generating project of the hospital and trying to boost the hospital income, although it is purely counted as non medical related activity.

On behalf of the hospital management team,

…….

Dr. Joseph Lugumila (AMO)
Doctor In-charge

Background

The Hospital was founded on the large highland plateau of Tanzania in Tabora region in the early 1930s by the Missionary Sisters of Our Lady of Africa "The White Sisters". At this site, in the village of Uhemeli, Ndala Hospital was built in 1965. It is a voluntary agency hospital. Under the auspices of the Archdiocese of Tabora, the Sisters of Charity of St. Charles Borromeo are responsible for its management.

This hospitals vision:

The sick cared, saved and liberated in the wholeness of God's kingdom.

The environment

Ndala Hospital is situated in Nzega district, near the border with Uyui district. The hospital lies 8 km off halfway the main road between the district capital town Nzega and the regional capital town Tabora. Ndala is mostly relying on these towns, both approximately 70 km away, for supplies. This road is still an unpaved road, in poor condition during the wet season, but construction of a new bitumen standard (tarmac) road is well underway.
The area around Ndala is arid and during the long dry season collected rainwater and water collected from one of the wells is used. The local government is presently building a new water distribution system with multiple taps in the village to replace the 1 shallow well which is currently used by the whole village. For electricity the hospital relies on solar panels and a generator. Soon the village and hospital are getting connected to the national TANESCO power grid. Besides the aforementioned developments the hospital has also benefited with the arrival of a mobile telecommunication network (starting with telephone in 2003) and large scale introduction of motorcycles, which enables patients to reach the hospital earlier.

Community and Health status

Demographic and economic data

Tanzania had an estimate population is 43 million in 2010, with more than 2 million living in Tabora region (population density of 31/sq km). Tanzania is one of the poorest countries of the world and ranks 152nd country on the world Human Development Index. The Gross Domestic Product per capita is USD 553. Most people in rural areas (90% in Ndalas catchment area) are involved in peasant farming and animal husbandry.

Health Indicators

Overall Tanzania health indicators remain poor, although figures are improving. The life expectancy on the mainland is 55 years. Per 1000 live births, 51 infants and 81 under-fives die. There are 454 maternal deaths per 100,000 live births. Incidental cases of rabies and tetanus occur, as well as epidemics of measles, which shows there are still major public health problems.

The total fertility rate of rural mainland Tanzania is still high; 6.1 children per woman. Only 27% of all Tanzanians use modern family planning methods.

AIDS pandemic

The effects of the HIV/AIDS pandemic contribute to the poor health indicators. Mainland Tanzania's overall prevalence is 5.8 percent, among women and men 6.8 and 4.8 percent respectively. Unprotected heterosexual intercourse is responsible for 80% of all new infections, mother-to-child transmission accounts for 18%. The prevalence in Tabora region is estimated at 6.1% in 2007/2008.

Community

Ndala ward consists of 4 villages: Uhemeli, Kampala, Wita and Mabisilo. The approximately 20,000 people in these villages are for their primary care dependent on Ndala Hospital, but the catchment area for second line treatment is much bigger, up to 7500 sq. km, inhabited by 300.000 people. The majority of these people are of Nyamwezi and Sukuma tribes. It is a rural area with arid land at an altitude of 1100 meters. 15% of the land is cultivated. Main products are maize, rice and groundnuts. Tabora region is also known for tobacco and honey.

Health infrastructure and external relations

Health infrastructure

Ndala hospital is situated at the border of Nzega and Uyui districts. Nzega district has a government hospital, but Uyui district has no hospital. About 55 kilometers to the Northeast, in Igunga district, is Nkinga Mission Hospital, which is a referral hospital and offers good referral options for ophthalmological and orthopaedic patients. Another official referral hospital is Kitete Regional hospital in Tabora, but does not function as such. In reality, Ndala Hospital functions often as a referral hospital for government hospitals, especially for surgical patients. The main referral option is Bugando Medical Centre in Mwanza, about 330 kilometers north, and Dar es Salaam for oncological patients. Referral this far is often not an option, so most acute problems need to be solved in Ndala.

The Archdiocese of Tabora

The hospital is owned by the Catholic Archdiocese of Tabora. The Administrator and Medical Officer in charge (MOiC) are members of the Archdiocesan Health Board (AHB), in which all health facilities under the Catholic Archdiocese are represented. Ndala is the only hospital, furthermore there are three catholic health centres (Ussongo, Ipuli and Kaliua) and five dispensaries (Kipalapala, Igoko, Lububu, Mwanzugi, Sikonge and Bukene). In 2012 every month a medical officer visited Igoko Dispensary one day to support the staff. The AHB convened 4 times in 2012. The AHB gets structural report from Japanese Overseas Christian Medical Cooperative Service (JOCS). The current secretary is Fr. Alex Nduwayo.

Christian Social Services Commission

The Christian Social Services Commission (CSSC) is the joined body for all Christian related institutions in Tanzania, both for health and education. The CSSC should function as a link between government and mission institutions and formulation of joint policies. There is a CSSC zonal office in Tabora. The CSSC assists Ndala Hospital with sponsorship of staff, administrative issues and has been working on building a new theatre complex.

Government

Ndala Hospital participates in the health activities of Nzega district. The District Health Management Team (DHMT) visits regularly for supervision. The district relies on the hospital for 1st line care in Ndala village and supplies the hospital with vaccinations. Ndala Hospital receives a share of the district Basket Fund and the Ministry of Health (MoH) provides staff grants for 38 qualified workers.
The MOic of Ndala Hospital is a member of the District Health Board (DHB) and involved in compiling the Comprehensive Council Health Plan (CCHP).Both the District Medical Officer (DMO) and Regional Medical Officer (RMO) are members of the Board of Governors (BoG) of Ndala Hospital.

Technical Assistance

Ndala Hospital participates in the AMREF flying doctor outreach program of Tabora Region. In 2012 6 visits of 4 days were made by the following specialists: an ENT surgeon, a gynaecologist, a physician (with a laboratory technician), a reconstructive surgeon and 2 times a urologist. The Belgian organization Medics without Vacation also regularly sends medical teams and equipment, this year with a gynaecologist and midwife. Unfortunately the 2012 scheduled visit of dr. Miyao, surgeon from JOCS, could not go through. In March and December a team of Spanish maxillofacial surgeons from Fundación Españiola de Cooperación Sanitaria visited to do cleft lip surgeries. Dr Myrrith, once a medical officer of Ndala and now a gynaecologist visited the hospital on a personal basis. Management assistance is given by a group of Dutch doctors. Three have them have visited in 2012.

Donors

Ndala is still relying on friends and donors to help with projects and activities. Donations can be send to the euro account of the hospital or through the Tabora Foundation. In this report many donors are mentioned in the section regarding their help. A complete list of names is given in appendix 5. In this section we would like to mention Pius XII Foundation, which helps in construction and renovation of hospital buildings, Nolet Foundation for educational sponsorships and sponsoring of the Puge petrol station and Porticus, which has given grants for the renovation of the Reproductive and Child Health clinic (RCH) and the completion of the petrol station.

Management

The hospital is managed by the Hospital Management Team (HMT). The HMT is responsible for the day-to-day management and consists of 5 members (see appendix 2 for more details). Trough the Board of Governors (BoG) the Catholic Archdiocese of Tabora appoints new members. The Board of Governors meets twice per year. The Board sets policies, approves budgets and supervise the activities of the HMT. In 2012 some discussion has risen about the functioning of the HMT. A government audit has pointed out their actions are according to the legislation.

Human Resources

The Human Resource officer is responsible for human resource management. Ndala Hospital follows the Catholic Archdiocesan Conditions of Service and employs staff on a contracts for a period of 2 years. This is done to increase flexibility.
Retention of staff is difficult, which is seen when comparing the current hospital staff to the government establishment (see appendix 5). With local developments regarding road pavement and electricity the Ndala hopes to retain workers better. Other measures to improve retention are letting staff houses at favourable prices and a revolving fund for loans. An educational fund for children of hospital workers is supplied by the Tabora Foundation.

Training and upgrading

It is hospital policy to send staff for upgrading whenever possible to improve educational levels of staff. A bondage contract ensures the trainee will use new skills in favour of the hospital. Appendix 4 shows staff in training in 2012.
Workers also get the opportunity to go to seminars and trainings in their field of expertise. In 2012 Ndala Hospital together with Jhpiego organized a training of HIV Provider Initiated Counseling and Testing for 33 workers for 5 days. On Wednesdays clinical lessons, given by staff or visiting specialists, are organized.
Ndala Hospital participates in the training of Dutch medical students from Groningen and Rotterdam for Tropical Medicine, Public Health and elective internships. In 2012 seven students worked in Ndala Hospital. Two Dutch doctors, completing their tropical medicine masters, visited the hospital for an internship of 2 months. Two students came to do research, but due to lack of cooperation by the National Institute of Medical Research were not able to complete their study.

Finances

The administrative and accounts department is headed by the hospital administrator. Here an overview is given. Although the hospital income is almost enough for running costs, deficits remain and for investments and expensive maintenance the hospital is depending on donations. The contributions of the government are insufficient and the patients too poor to be able to pay higher prices. In 2012 the hospital needed to increase the prices of treatment, especially surgery.

Trend income/expenditure (Tanzanian Shillings)

Income	**2012**	**2011**	**2010**	**2009**
Hospital	**442,912,695**	381,647,938	354,300,760	386,300,760
Government	**276,122,668**	101,827,898	90,581,261	67,979,150
Donations	**98,847,399**	137,004,962	68,008,300	60,365,000
Study sponsors	**12,528,000**	8,722,500	35,980,044	24,262,500
Bank	**-**	700,000	28,189,686	3,462,500
Total income	**828,410,762**	629,903,298	577,060,051	542,201,140
Expenditure				
Medicines and new office block (from Pius XII)	**29,826,237**	61,801,150	76,779,840	32,898,950
TB ward (from Sonnevanck)	**14,204,863**	10,737,750	11,980,755	10,676,000
Study/training	**18,530,000**	43,986,100	47,118,344	10,576,000
Basket fund	**65,713,540**	63,768,940	42,207,234	76,537,546
Running costs (administrative, incl. salaries)	**663,928,288**	445,235,850	387,707,337	421,460,364
Total expenditure	**792,202,928**	620,810,040	565,703,510	570,016,919
Balance				
Hospital own income vs	**442,912,695**	381,647,938	354,300,760	386,300,760
Running costs	**663,928,288**	445,235,850	387,707,337	421,460,364
Balance	***-221,015,593***	*-63,605,912*	*-33,406,413*	*-35,328,374*
Hospital own income vs	**442,912,695**	381,647,938	354,300,760	386,300,760
Total expenditure	**792,202,928**	620,810,040	565,703,510	570,016,919
Balance	***-349,290,233***	*-239,162,102*	*-211,402,450*	*-183,884,929*
Addendum				
NSSF sharing (income)	**2,133,000**	2,820,000	2,652,000	3,117,870
EGPAF (income)	**855,800**	945,473	3,567,830	0
Treatment employees (expenditure)	**0**	3,307,650	40,000	50,000
Unpaid patient fees (expenditure)	**522,000**	375,700	251,400	695,150

Curative services

Out-patient department (OPD)

Trend OPD

General OPD	2012	2011	2010	2009
New cases	15,961	8,418	9,633	10,721
Re-attendances	12,021	14,045	17,036	
Re-attendances (dressing)	1,935	2,559	4,557	2,935
Total OPD	**38,917**	**25,022**	**31,226**	**25,609**
Special clinics				
TB/leprosy (registered)	138/4	139/20	136/20	148/8
Epilepsy/Mental health (attendances)	2014			
Eye-clinic (attendances)	359	414	391	287
Dental clinic (extractions)	118	124	126	144

TB and Leprosy clinic

All TB activities and treatment costs are sponsored by the Sonnevanck foundation, so we can provide free services to all patients. The new TB ward will be put in permanent use shortly. The TB clinics are run by 2 Clinical Officers.

Trend tuberculosis

	2012	2011	2010	2009
Patients on January 1st	45	51	43	66
New patients	86	80	88	72
Re-treatment	5	1	2	7
Transferred -in	2	5	3	3
Transferred -out	0	2	0	0
Total registered	**138**	**139**	**136**	**148**
Pulmonary (sputum-pos)	69	70	79	74
Pulmonary (sputum-neg)	15	24	22	40
Extra-pulmonary	54	45	35	44
HIV-pos	23	54	43	42
Treatment results:				
Completed	46	39	37	35
Cured	32	47	42	48
Failed	0	1	0	0
Transferred	21	2	12	2
Died	7	11	3	1
Defaulted	2	5	10	23

Trend leprosy

	2012	2011	2010	2009
Pauci-bacillary	**0**	0	0	0
Multi-bacillary	**4**	20	20	8
Total registered	**4**	**20**	**20**	**8**

Epilepsy and mental health clinic

Once weekly a specialized nurse runs the epilepsy and mental health clinic. The treatment is free and sponsored by the Tabora Foundation.

Eye clinic

The weekly eye clinic is run by a specialized nurse. Patients can be referred to Nkinga hospital for refraction tests and cataract surgery.

Most common eye diseases in 2012

Eye disease	2012
Conjunctivitis	**72**
Cataract	**51**
Trauma	**36**
Refraction	**58**
Presbyopia	**44**
Others	**98**

Dental clinic

In the dental clinic currently only extractions are done, 118 in 2012. There are plans to train new staff for this clinic.

In-patients

Patients are admitted in one of the four wards: Male, Female, Children and Maternity ward. There is private ward, but also every regular ward has a semi-private room. All the rooms have isolation rooms, the children ward has five of these and an extension which can be used in case of epidemics. In 2012 Female ward has been extensively renovated, other buildings will follow.

Trend on-patients (total beds: 128)

	2012	**2011**	**2010**	**2009**
General admissions	**6,148**	5,255	5,425	6,959
Admissions for delivery (+ BBA)	**2,280**	2,129	2,228	2,218
Total admissions	**8,428**	**7,384**	**7,653**	**9,177**
Number of deaths	**268**	373	297	443
Overall death rate (per 1000 admissions)	**32**	70	55	63

In-patients per ward 2012

	Beds	**Admissions**	**Deaths**	**Death rate /1000**
Male	28	2,027	71	35
Female	28	1,644	75	46
Children	45	2,226	107	48
Maternity	20	2,503	11	*
Premature	4	35	3	4
Private	3	5	1	200
Total	**128**	**8,428**	**268**	**32**

*See next paragraph maternal mortality

Obstetric department

Figures of this department remain stable through the years. If the small decrease in Caesarean sections is related to the small increase in fresh stillbirths is unclear, although the rate between macerated and fresh stillbirths is still acceptable.

Trend obstetric department

	2012	**2011**	**2010**	**2009**
Deliveries	**2,260**	2,107	2,195	2,209
BBA	**20**	22	33	9
Total deliveries	**2,280**	**2,129**	**2,228**	**2,218**
Spontaneous vertex delivery	**1,919**	1,746	1,910	1,936
Breech delivery	**35**	69	57	56
Vacuum (ventous) extraction	**69**	46	15	11
Multiple pregnancies: 2x	**53**	73	100	69
3x	**0**	0	3	1
Caesarean sections*	**254 (11.2%)**	246 (11.7%)	256 (11.7%)	215 (10%)
Maternal deaths	**11**	14	13	10

*This number is derived from the theatre register and differs from the delivery book (237).

Complications 2012

Uterine rupture	**11 (of which 2 with 1 previous scar)**
Placenta praevia / APH	**13**
Post-partum hemorrhage (PPH)	**9**
Abruptio of placenta	**3**
Eclampsia	**29**

Trend neonatal outcome

Births	**2012**	**2011**	**2010**	**2009**
In hospital deliveries	**2,260**	2,107	2,295	2,275
Before arrival	**20**	22	33	9
Extra babies of multiple pregnancies	**52**	73	106	53
Total babies	**2,332**	**2,195**	**2,328**	**2,284**
Macerated stillbirths	**76**	47	48	58
Fresh stillbirths (per 1000 newborns)	**85 (36‰)**	74 33‰	73 31‰	77 34‰

Maternal deaths 2012

Maternal deaths are regularly discussed during maternal mortality audits with doctors and midwives. After extra attention for many eclampsia cases last year, this year we saw less mortality in eclampsia. Unfortunately there was an increase in deaths due to ruptured uteruses. Two were admitted with already ruptured uteruses, the third ruptured in the hospital. There were 2 early (non-obstetrical) maternal deaths, both due to criminal abortions.

Maternal deaths 2012

	Diagnosis & cause
1.	PPH caused by retained placenta
2.	Ruptured uterus
3.	Ruptured uterus
4.	Perforated uterus with septic shock (after criminal abortion)
5.	Hypovolemic shock in incomplete (criminal?) abortion
6.	PPH
7.	Abruptio of placenta
8.	Ruptured uterus
9.	Anaesthetic complication in Caesarean Section
10.	Sudden death short after delivery, unknown cause
11.	Eclampsia

Theatre

Trend surgery and anaesthesia

	2012	**2011**	**2010**	**2009**
Major procedures	**643**	686	697	634
Minor procedures	**2,473**	2,089	2,728	1,694
Anaesthesia (general/local or regional)	**1,318 (798/520)**	1,504 (747/757)	1,728 (893/835)	1,595 (756/839)

Major procedures 2012

General		**Genito/urinary**	
Bowel perforation	**5**	Prostatectomy (open, transvesical)	**43**
Bowel resection and anastomosis	**20**	Prostatectomy (TURP, transurethral)	**23**
Colostomy	**2**	Urethral/bladder stones removal	**2**
Adhesiolysis	**3**	Orchidectomy	**12**
Cleaning abdomen (abscess I&D)	**20**	Hydrocelectomy	**10**
Appendectomy	**12**	Urethro-cystoscopy	**3**
Diagnostic laparotomy	**6**	Other genito/urinary	**-**
Cholecystectomy	**-**		
Inguinal hernia	**38**	Obstetrical/gynaecological	
Other hernia	**7**	Caesarean section	**183**
Splenectomy	**1**	CS which with tube ligation	**41**
Volvulus (sigmoid/intestinal)	**5**	Repeat Caesarean section	**30**
Mastectomy/breast lump	**3**	Ectopic pregnancy	**30**
Hemorrhoidectomy	**3**	Bilateral tube ligation	**44**
Excision tumor	**8**	Ovariectomy/cystectomy/myomectomy	**7**
Sequestrectomy	**2**	Total abdominal hysterectomy	**17**
Perforated peptic ulcer	**6**	Subtotal hysterectomy	**5**
Contracture release	**1**	Repair 3rd degree tear	**5**
Amputation (of limb)	**2**	Pelvic abscess/pyosalpinx	**5**
Re-laparotomy (exploratory)	**9**	Colporraphy	**3**
Skin grafting	**2**	Other O/G	**4**
Other general	**2**		
		Other specialties	
		Nasal polyp/adenoid hypertrophy	**4**
		Tonsillectomy/adenoidectomy	**6**
		Cleft lip/palate repair	**41**

Minor procedures 2012

General		**Orthopaedic**	
I&D abscess or arthritis	**183**	Reduction dislocation (joint/fracture)	**100**
Exploration/aspiration	**6**	Tibial pin traction	**19**
Cut wound, suturing	**250**	Amputation finger/toe	**9**
Woundtoilet/necrotectomy	**120**	Back slab POP	**90**
Suture removal	**360**	Circular POP	**93**
Foreign body removal	**42**	Arm sling	**76**
Bandaging	**40**	Clubfoot POP reduction	**13**
Excision tumour	**30**		
Tongue tie	**9**	**Obstetrical/gynaecological**	
Ascites aspiration/tap	**30**	Speculum examination	**130**
Pleural aspiration/tap	**5**	Evacuation/D&C	**280**
Thorax drainage	**1**	Manual removal retained placenta	**10**
Anal fissure, proctoscopy	**-**	Repair perineal or cervical tear	**7**
Reduction rectal prolapse	**4**		
Ear syringing/otoscopy	**30**	**Genito-urinary**	
Wound dressings	**375**	Bugination	**10**
Other procedures	**3**	Supra-pubic catheterization	**35**
		Urinary catheterization	**165**
		Circumcision	**34**
		Reduction paraphimosis	**14**

Anaesthesia

Specialized nurses are responsible for giving anaesthesia and assist in resuscitation in all the wards. In the major theatre spinal regional anaesthesia is most frequently used, in the minor theatre most often ketamine.

2012	**Major procedures**		**Minor procedures**	
General	**Adult**	**Child**	**Adult**	**Child**
Halothane + intubation	208	90	0	0
Ketamine only	170	30	235	65
Local/regional				
Spinal anaesthesia	291	0	0	0
Saddle block	2	0	0	0
Nerve/biers block	0	0	0	0
Infiltration lignocaine	10	15	152	50
Total	**681**	**135**	**394**	**115**

Prevention and health promotion

Public health care / Tabora Foundation

Besides the RCH activities Ndala hospital has other programs focused on public health care, such as malnutrition program and several HIV/AIDS related services which are conducted at the Care and Treatment Center (CTC).

The Tabora Foundation
Ndala hospital lacks a large-scale primary health care department but fortunately the Tabora Foundation has many community-based public health programs. The Foundation is founded by a former MOiC, Dr George Joosten, and his wife Gon, and run by a local committee. Some of their activities:

- A reproductive HIV/AIDS awareness educational program for primary and secondary schools.
- Support of poor households in the area.
- Educational support of poor children.
- Support of small projects in Tabora region.

Reproductive and Child Care

This year the RCH has moved from the very old building to a new spacious and modern building with many rooms for seeing patients and a large hall.
The preventive clinics of the RCH are responsible for the ward Ndala with a total population of approximately 20.000 people. During the dry season a mobile RCH clinic visited the villages of Kigandu, Mitundu and Mabisilo. Because of lack of vaccines 3 months no vaccination was done, which explains for most part the decrease in vaccines given.

Trend total RCH attendances

	2012	**2011**	**2010**	**2009**
Under-5 and antenatal	**26,413**	25,195	27,444	23,354

Trend under-5 RCH attendances (1st and re-attendance)

Ndala	**2012**	**2011**	**2010**	**2009**
Children < 12 months	14,174	11,025	13,612	10,230
Children > 12 months	1,429	1,260	2,779	2,865
Subtotal Ndala	*15,603*	*12,285*	*16,391*	*13,095*
Mobile clinics				
Children < 12 months	629	1,166	1,106	992
Children > 12 months	403	447		195
Subtotal mobile clinics	*1,032*	*1,613*		*1,187*
Total under-5	16,636	**15,601**		**14,282**

Antenatal attendances

	2012	2011	2010	2009
Ndala	**9,546**	9,188	9,269	8,483
Mobile clinics	**231**	406	267	281
Total antenatal	**9,777**	9,594	9,536	9,072

Trend risk factors seen at RCH

Malnutrition **Under-5 1st attendance**	**2012**	**2011**	**2010**	**2009**
BWT 60-80 percentile	Unknown	9.8%	13.2%	9.8%
BWT below 60 percentile	Unknown	0.9%	0.2%	0.8%
Risk factors **Antenatal 1st attendance**	(total: 3655)			
Age < 16 years	16.2%	22.4%	12.8%	10.4%
Age > 35 years	7.3%	8.6%	7.3%	6.1%
Parity > 4	19.8%	24.2%	21.9%	18.3%
Hypertension (>140/90)	2.3%	1.5%	2.9%	2.8%
Anaemia (Hb <6g/dL)	3.5%	3.0%	3.8%	1.9%

Vaccines given

Tetanus toxoid (antenatal)	**2012**	**2011**	**2010**	**2009**
I	**2,103**	2,146	2,026	2,561
II	**1,065**	1,169	1,180	1,425
III	**309**	278	163	188
IV	**165**	163	104	111
V	**81**	124	48	88
BCG				
At birth	**499**	1,054	1,358	981
At later time	**512**	954	754	1,226
Polio				
0 (at birth)	**445**	1,254	1,370	1,132
I	**634**	1,437	1,666	1,861
II	**745**	1,211	1,839	1,741
III	**605**	1,051	1,429	1,212
DTP				
I	**762**	1,833	1,577	1,739
II	**874**	1,723	1,323	1,551
III	**773**	1,551	1,090	1,268
Measles	**710**	1,400	1,014	1,381
Total vaccinations	***10,282***	*17,348*	*16,941*	*18,465*
Vitamin A supplement	**710**	1,400	708	
Vaccinations children allocated outside Ndala ward	**unknown**	59%	48%	51%

Family planning

	2012	**2011**	**2010**	**2009**
New attendees	**88**	138	155	105
Total visits	**416**	797	540	450

HIV/AIDS programs

HIV/AIDS programs consist of various forms of testing and treatment aimed at early detection, increase health and prevention of transmission. Different departments are involved and in this report all these activities will be discussed in this section. The programs fall under the National AIDS control program and in Tabora region are sponsored by Elizabeth Glazer Paediatric AIDS Foundation (EGPAF). Due to national shortage of HIV test kits testing was not done in the VCT and PITC programs in the months of April, May, June and July.

Voluntary counselling and testing (VCT)

Voluntary counselling and testing increases awareness and promotes prevention by means of early detection.

Trend patients tested

	2012	**2011**	**2010**	**2009**
Clients counselled	**1000**	1753	2215	1954
HIV positive	**108 (11%)**	159 (9%)	266(12%)	243(12%)

Age groups tested 2012

Age (yr)	<15		15-24		25-34		35-49		>50	
Gender	M	F	M	F	M	F	M	F	M	F
Counselled	**28**	**16**	**136**	**188**	**168**	**144**	**128**	**120**	**56**	**44**
HIV pos	**8**	**2**	**6**	**26**	**20**	**16**	**10**	**14**	**2**	**4**

Care and Treatment Clinic (CTC)

The CTC of Ndala hospital, started in 2006 and since 2012 in a large new building, provides free care and treatment for patients living with HIV/AIDS. After receiving a positive test result patients are referred to the CTC where they will receive additional counselling and have to successfully attend 3 classes. After this they can start treatment with anti-retroviral therapy (ART). While previously only some first line drugs were available, the clinicians can now choose from a variety of drugs, including second line. In 2012 the new large and modern building was officially opened on January 25th by the regional commissioner. Also the laboratory is equipped with a CD4-counter to assess the level of immunity and thus determine the moment to start treatment. The staff consists of 24 people, most of whom have other functions in the hospital as well.

Trend patients CTC

	2012	**2011**	**2010**	**2009**
Number enrolled patients	**2,798**	2,297	1,967	
Patients on ART (percentage)	**1,308 (46.7)**	975 (42.4%)	843 (42.8%)	

Through the CTC 22 Village Health Workers (called Home based Care service providers) are visiting chronically ill patients. They are not being paid salary, but are provided with bicycles and get allowances to maintain them.

Trend visits Home Based Care

	2012	2011	2010	2009
Visits	3,201	3,641	2,702	
HIV/AIDS	3,001	2,591	1,761	

Prevention of Mother to Child Transmission (PMTCT)

Since 2006 Ndala Hospital participates in the national PMTCT program. 16 workers have been trained and provide services on a daily basis. In the RCH all pregnant women are counselled and tested. If tested positive she is assessed to be eligible to start lifelong ART or to receive prophylactic treatment during pregnancy and breastfeeding only. In maternity ward all women delivering are tested, if they have not been tested already. Drugs are supplied to mother and infant and they are referred back to the RCH for follow-up treatment and controls. Although this PMTCT schedule is proven to be very effective many barriers exist, mainly because women do not get tested during pregnancy (mainly because not attending any clinic) and because they abscond follow-up after delivery.

Trend PMTCT

	2012	2011	2010	2009
Pregnant mothers tested RCH	**2612**	2282	1977	1946
Mothers HIV positive RCH (percentage of total)	**74 (2.8%)**	71 (3.1%)	93 (4.7%)	69 (3.5%)
Referred CTC	**40**			
Maternal prophylaxis RCH	**74**			
Maternal prophylaxis LW	**8**			
Neonatal prophylaxis	**62**	25	35	
Neonates that came for follow-up	**229**	68	75	

Provider Initiated Testing and Counselling (PITC)

Patients who attend the hospital because of health complaints might be tested because the clinician thinks the complaints might be related to HIV infection. These patients are counselled by specially trained counsellors, either at the OPD or in the wards. In September the hospital organized a one week seminar for 34 hospital workers, for which teachers and learning materials were provided by Jhpiego.
Increasingly PITC is used as a screening method for asymptomatic patients, for example for all admissions in children ward, which accounts for the fall in patients tested positive. Also an increasing number of patients with symptomatic HIV have already been tested (before, elsewhere or through VCT) and do not need PITC.

Trend PITC

	2012	2011	2010	2009
Patients tested	**6,856**	1,714	2,512	6,59
Patients positive (percentage)	**196 (2.9%)**	290 (16.9%)	687 (27.3%)	144 (21.9%)

Supporting Services

Laboratory

Ndala hospital laboratory support medical staff. In 2012 the laboratory was equipped with a new haematology machine, which enables a number of investigations which was not possible before. The machine was installed in September, but due to lack of reagents was not used in December. Although the machine can measure haemoglobin correctly, it is more expensive than the old method using chromatography.

Laboratory investigations 2012

	Total	Positive		Total	Abnormal
Parasitology			**Haematology**		
Blood slide	**7610**		Haemoglobin	**4948**	**1001**
Malaria		**1700**	White blood cells	**435**	
Stool	**520**		ESR	**303**	
Hookworm		**76**	Sickle Cell Test	**151**	**21**
Giardia		**1**	**Biochemistry**		
Ascaris		**3**	Liver function	**699**	
Strongyloides		**1**	Serum glucose		
Urine	**1978**		Urine protein	**973**	
Schistosoma		**5**	Urine pregnancy	**699**	**298**
Trichomonas		**3**	**Serology**		
Bacteriology			VDRL (Syphilis)	**162**	**14**
Ziehl-Neelsen	**321**		HIV (all programs)		
Tuberculosis		**58**	Blood donation		
Gram	**152**		Units transfused	**824**	
Bacteria		**21**	**Other**		
			Sperm analysis	**6**	

Pharmacy and IV fluid production unit

Drugs are kept in the Main Pharmacy from which daily drugs are given out to the dispensing room at the OPD. In 2011 this building, together with the IV-unit have been renovated and enlarged.
The IV fluid production unit produces sterile fluids for injection.

Trend IV unit

Liters	2012	2011	2010	2009
Normal saline	2060.5	2318	-	-
Dextrose 5%	585.5	1175.5	3045	-
Ringer's Lactate	367	-	-	-
Irrigation fluid	1660	945	5980	-
Dextrose 50%	3.4	12	15	-

Radiology

The radiology department supplies the hospital with radiography and ultrasonography. In 2012 a new modern ultrasound machine has been installed, donated by Vlietlandziekenhuis and transported through Nolet Foundation, both from Holland. The batteries that boost the X-ray machine have lost their power, which now generate insufficient power for X-ray which need higher voltage (for example pelvis, abdomen and obese people).

Radiology

	2012	**2011**	**2010**	**2009**
Chest	**312**	341	136	310
Extremities	**480**	361	204	399
Shoulder	**15**	19	7	9
Pelvis/hip	**42**	53	19	53
Vertebral column	**37**	13	11	15
Plain abdomen	**15**	55	11	7
Hysterosalpingogram	**5**	-	-	-
Total	**906**	**861**	**400**	**804**
Films used	**1200**	922	516	1003

Ultrasound

	2012	**2011**	**2010**	**2009**
Obstetrical	**131**	106	78	142
Gynaecological	**415**	206	160	202
Abdominal (upper)	**112**	188	152	185
Urologic	**63**	32	21	40
Heart	**9**	6	1	3
Other	**5**	1	2	-
Total	**735**	**539**	**414**	**572**

Administration

The administrator is responsible for finances and control. Most of this work is still done manually, although increasingly computers are used.

Medical records and statistics
The medical records clerk is responsible for archiving and statistics and reports to the MOiC. Medical data are collected according to the national MTUHA health information system and sent to the District Health Office, as well as the Archdiocesan Health Secretary. Patient records are kept at the office at the reception in the recently renovated OPD building. Each patient gets a unique personal registration number.

Technical Department (TD) and Transport

The TD has the task of maintenance of hospital buildings, staff houses, water collection, electrical systems, medical equipment and vehicles. The hospital has been using a combination of solar and generator powered electricity. TANESCO has been connecting Ndala to the national power grid and a consult electrical company, together with staff of the TD, has been upgrading the hospital electrical system to be able to accommodate TANESCO electricity. In the end of 2012 some staff houses were connected to the national power grid, in the beginning of 2013 the rest of the hospital buildings will follow.
The hospital uses 3 vehicles: 2 Toyota Landcruisers and 1 Landrover pick-up. The vehicles are mostly used for transport of goods, supplies and staff. Occasionally a car is used for the referral of patients. Four of the TD staff work as drivers.

Domestic department

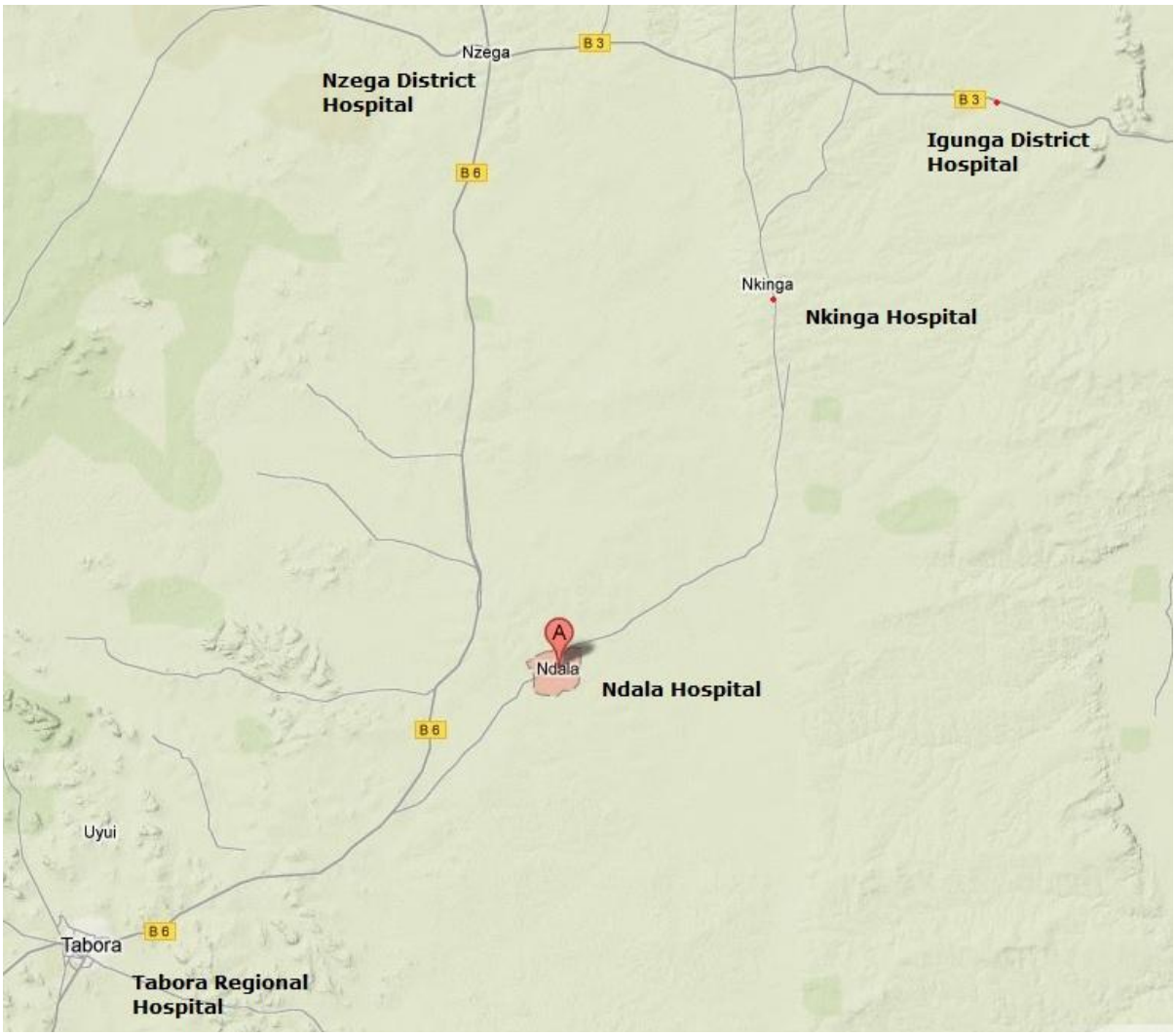
The domestic department handles a variety of responsibilities, such as laundry, environmental control, bicycle shed, guesthouses, staff houses and storage of non-medical goods. The guesthouses are frequently used to accommodate visitors.

Plans for the future

- Celebrating Ndala hospitals 50-year anniversary (January 26th 2013)
- Renovation of the wards (finished: female ward, next: maternity ward)
- Starting to use the finished new Theatre complex and Mortuary (by CSSC)
- Renovation of the old Theatre complex, Minor Theatre and rooms for special clinics (by CSSC, unknown timetable)
- Connection of the hospital to TANESCO national power grid (beginning 2013)
- Upgrading iv-unit to KCMC standards, including training of staff (prospecting beginning 2013)
- To repair/replace batteries of X-ray equipment
- Construction of a waste disposable system
- Upgrade staff for specialist services, e.g. ultrasound, dental care, dermatology
- Recruit more staff
- Improve secondary working conditions of the workers

Appendices

Appendix 1: map



Appendix 2: management

Members of the Board of Governors (December 2012)

Name	Position BoG	Function
His Grace Paul Ruzoka	Chairman	Archbishop Archdiocese Tabora
Rev. Fr. Alex Nduwayo	Member	Secretary AHB
Rev. Fr. Joseph Buhili	Member	Treasurer Archdiocese Tabora
Rev. Fr. Paschal Kitambi	Member	Secretary Archdiocese Tabora
Mr. Festo Ndonde	Member	Caritas Tabora
Rev. Sr. Bernadetta Kessey CB	Member	Regional Superior Sisters of CB
Rev. Sr Theresia Sungi MM	Member	Regional Superior Sisters MM
Rev. Fr. Nicolas Bulabuza	Member	Parish priest Ndala parish
Sr. Dr. Marie-José Voeten CB	Member	MOiC Sengerema Hospital
Dr. John Mwombeki	Member	District Medical Officer Nzega
Dr. Leslie Mhina	Member	Regional Medical Officer Tabora
Rev. Sr. Reni Ngadi	Attendee	Hospital Administrator
Dr. Joseph Lugumila	Attendee	MOiC Ndala Hospital
Mr. Thomas Madimilo	Attendee	Health Secretary Ndala Hospital

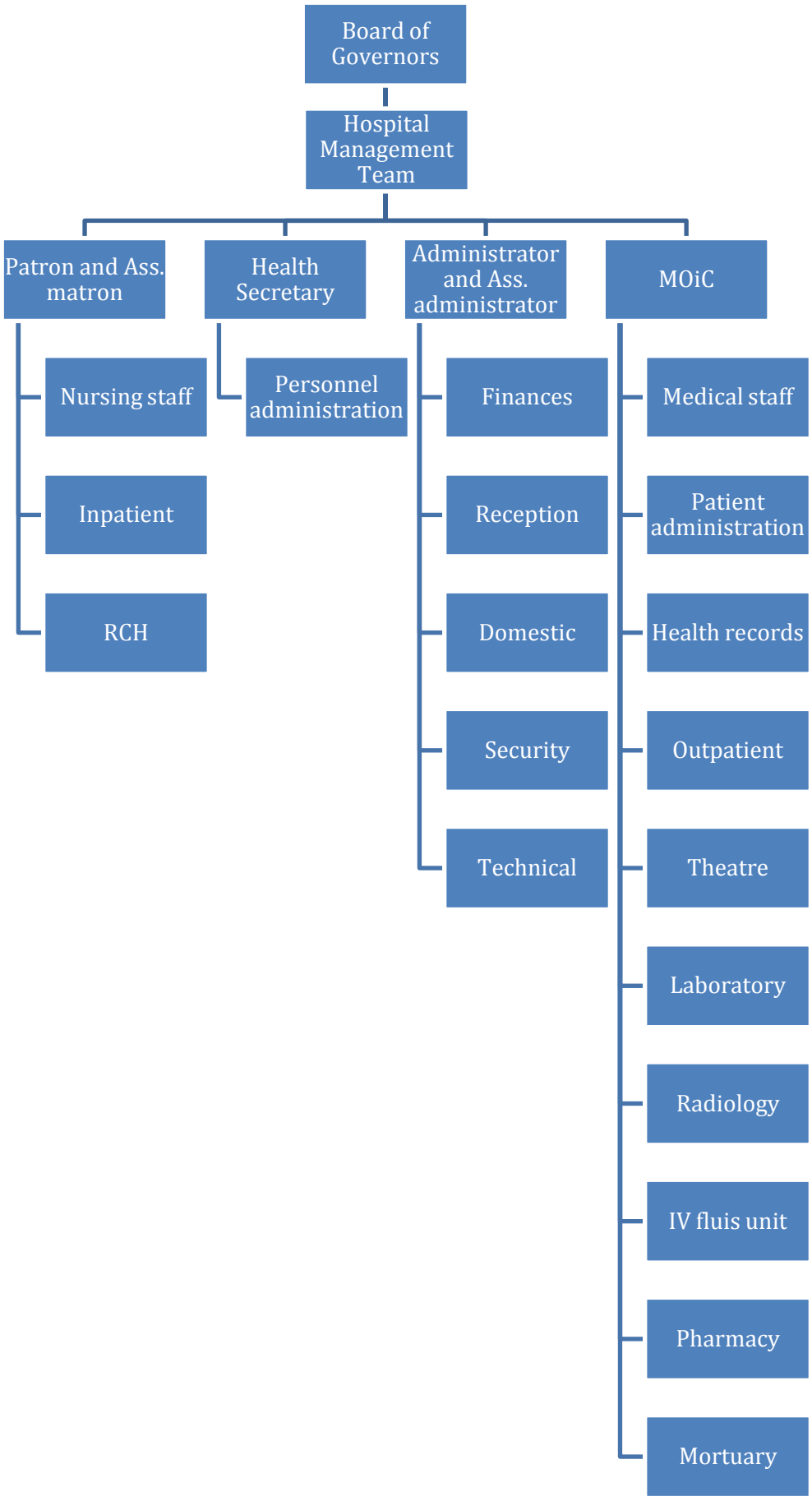
Members of the Hospital Management Team (December 2012)

Name	Function
Sr Reni Ngadi CB	Administrator
Sr. Georgita Paul	Assistant Administrator
Mr. Thomas Madimilo	Health Secretary
Dr. Joseph Lugumila AMO	Medical Officer in Charge
Mr. Thomas Mtilimbanya ANO	Nursing Officer in Charge (patron)
Mrs. Agnes Elikana ANO	Assistant Nursing Officer in Charge (assistant matron)

In charge positions (December 2012)

In Charge	Name
Medical Officer in Charge	Dr. Joseph Lugumila AMO
Nursing Office in Charge	Mr. Thomas Mtilimbanya ANO
Ass. Nursing Officer in Charge	Mrs. Agnes Elikana ANO
Administrator	Rev. Sr. Reni Ngadi CB
Ass. Administrator	Sr. Georgita Paul CB
Health Secretary	Mr. Thomas Madimilo
Domestic department	Sr. Symphrose Melkiad CB
Compound	Rev. Sr. Reni Ngadi CB
Technical Department	Mr. Bruno Andrea Matalu
Male Ward	Mr. Samuel Nkilijiwa ANO
Female Ward	Rev. Sr. Florida Andrea ANO
Maternity/Labour Ward	Mrs. Gertruda Emanuel ANO
Children Ward	Mr. Obed Edward TN
RCH	Mrs. Neema Malembeka EN (acting)
Laboratory	Mrs. Flora Deo, Laboratory Assistant
OPD	Mrs. Grace Mlay ANO
Pharmacy	Mrs. Dorothy Massy ANO
Theatre	Mr. James Zakayo ANO
Radiology	Mr. Lucas Madeleka
Clinical Officers	Mr. Patrick Chubwa CO
CTC	Mr. Adriano Michael CO
VCT	Mr Elisha Maige, Laboratory technologist
PMTCT	Mr. Thomas Mtilimbanya ANO
PITC	Mr. Matthew Nduguru ANO
Eye clinic	Mrs. Grace Mlay ANO
Epilepsy/Mental health clinic	Mr. Matthew Nduguru ANO
TN/Leprosy clinic	Mr. Patrick Chubwa CO
Health records	Mr. Godfrey Silas
Security	Mr. Cypriano Emanuel
Laundry	Mr Emmanuel Dotto
Environmental control	Mr. Benedicto Kulinduka
Secretary Tughe	Mr. Bruno Charles Matalu

Organogram


Board of Governors
Hospital Management Team
Patron and Ass. matron
Health Secretary
Administrator and Ass. administrator
MOiC
Nursing staff
Inpatient
RCH
Personnel administration
Finances
Reception
Domestic
Security
Technical
Medical staff
Patient administration
Health records
Outpatient
Theatre
Laboratory
Radiology
IV fluis unit
Pharmacy
Mortuary

Appendix 4: staff mutations and staff establishment 2012

Staff that left in 2012

No	Name	Designation	Department
1	George Saulo	Laboratory technologist	Laboratory
2	Erastus Omolo	ANO	Maternity Ward
3	Nassra Mohammed	EN	Children Ward
4	Salome Sangari	EN	RCH
5	Lydia Mbembe	ANO	Maternity Ward
6	Lydia Shoo	ANO	Maternity Ward
7	†Esther Lazaro	Medical Attendant	Children Ward
8	Peter Katinda	Radiology technologist	Radiology
9	Chitegetse Rushatse	ANO	Maternity Ward
10	Joyce Shitindi	ANO	RCH
11	Danielle van den Hamer	NO	Female Ward
12	Steven Mhoja	ACO	Opd
13	Yohana Yoram	Attendant	Domestic
14	Johnbaptist Mgayiwa	Attendant	Domestic
15	Boniphace Midede	Reception attendant	Reception

Staff that joined in 2012:

No	Name	Designation	Department
1	Zawadi G. Mbassa	Assistant technologist	Laboratory
2	Iddi Pungu	ANO	Female Ward
3	Lydia Yusto	ANO	Maternity Ward
4	Sylvanus Mapenza	ANO	Maternity Ward
5	Claire Omary	CO	Medical Staff
6	Japhet P. Lemi	CO	Medical Staff
7	Imelda Mabula	Medical Attendant	Children Ward
8	Sr. Monica Mwangi CB	Cashier	Administration
9	Sr Georgita Paul CB	Assistant Administrator	Administration
10	Sr. Esther Mharani CB	Lawyer	Administration
11	Pius Itengesha	Reception attendant	Reception
12	Mwanahamisi Mohammedi	ANO	Maternity Ward
13	Matthias Kasanga	EN	Theatre
14	Scholastica Peter	EN	Children Ward
15	Francis Lufungulo	ACO	Opd
16	James Paul	Attendant	Domestic
17	Hussein Kakema	Attendant	Domestic
18	Paschal Maganga	Attendant	Domestic

Staff on training / upgrading 2011

Name	Qualification	Institute	Sponsor	Available
George Mgalega	MO	Kariuki	Nolet Foundation	2013
Sr. Christina Mapunda CB	MO	Kariuki	JOCS	2013
Sharifa Shabani	MO	Bugando	Cordaid / Nolet F	2013
Sr. Veneranda Christoffer CB	AMO	Ifakara	Porticus	2013
Sr. Beatrice Ekisa CB	Accountant	SAUT	Porticus	2016
Sr. Beatrice Mroso CB	Ass. Pharmacy Technician	KCMC	Porticus	2015

Positions filled and required December 2012

	Present	Required	Deficit
Medical Officer (MO)	1	2	1
Assistant Medical Officer (AMO)	3	3	0
Clinical Officer (CO)	6	7	1
Nursing Officer (NO)	0	2	2
Assistant Nursing Officer (ANO)	15	16	1
Trained Nurse (TN)	8	12	4
Medical Attendant	46	45	
Laboratory Technologist	1	2	1
Ass. Laboratory Technologist	4	4	0
Lab. Attendant	2	2	0
Pharmacology Technologist	0	1	1
Ass. Pharmacology Technologist	0	1	1
Radiology Technologist	0	1	1
Ass. Radiology Technologist	0	1	1
Administrator	1	1	0
Ass. Administrator	1	1	0
Hospital Secretary	1	1	0
Health Recorder	0	1	1
Office Attendant	4	4	0
Receptionist	6	6	0
Domestic department	2	3	1
Driver/Technician	4	4	0
Security Guard	8	8	0
Total	**113**	**128**	**16**
In training	6		

Appendix 5: donations 2012

Stichting Pius XII (renovations)
Congregation of St. Charles Borromeo General Board Maastricht (medicines)
The Sonnevanck Foundation (treatment of TB patients)
Stichting Nolet (expatriate staff, upgrading staff, transport ultrasound, petrol station)
Porticus (renovation RCH, petrol station)
Cordaid (upgrading staff)
Stichting Rentebescherming (upgrading staff)
Tabora Foundation
Stichting Bijzonde Noden Arnhem
Vlietlandziekenhuis (Ultrasound)
Jhpiego (facilitators PITC training)
AMREF Flying doctors (specialists)
EGPAF (HIV/AIDS program)
Medics without vacation (specialists)
Fundación Españiola de Cooperación Sanitaria (cleft lip surgery)
Dr. Herman Drewes (staff children education fund)
KWF through CSSC (construction new theatre complex and mortuary)
JOCS (upgrading staff)
Deurman Stichting (blankets, uniforms)
Dr. Paulus Lips (upgrading)
Emmanuel Parish Ommen (renovation RCH)
Wim Zwetsloot, Ommen (renovation RCH)
Xiao-Wei Zhou, Groningen
Cocky and Jan Wiersma, Gouda (renovation RCH)
Dr Ramos and Rotary Club Madrid (new suction machine)

Many thanks to all!

Appendix 6: abbreviations

ACO	Assistant Clinical Officer
AHB	Archdiocesan Health Board
AIDS	Acquired Immunodeficiency Syndrome
AMO	Assistant Medical Officer
ANO	Assistant Nursing Officer
APH	Ante-Partum Haemorrhage
ART	Anti-Retroviral Therapy
BBA	Born before arrival
BCG	Bacille Calmette-Guérin
BoG	Board of Governors
BTL	Bilateral Tube Ligation
BWT	Bodyweight
CB	Charity of St. Charles Borromeo Congregation
CO	Clinical Officer
CS	Caesarean Section
CSSC	Christian Social Services Commission
CTC	Care and Treatment Clinic
DHMT	District Health Management Team
DMO	District Medical Officer
DHB	District Health Board
D&C	Dilatation and Curettage
DTP	Diphtheria Tetanus Polio
EGPAF	Elizabeth Glaser Pediatric AIDS Foundation
EN	Enrolled Nurse
ENT	Ear Nose Throat
ESR	Erythrocyte Sedimentation Rate
GDP	Gross Domestic Product
Hb	Haemoglobin
HDI	Human Development Index
HIV	Human Immunodeficiency Virus
HMT	Hospital Management Team
I&D	Incision and Drainage
JOCS	Japanese Overseas Christian Medical Cooperative Service
LW	Labour Ward
MM	Daughters of Mary Congregation
MO	Medical Officer
MOiC	Medical Officer in Charge
MoH	Ministry of Health
NO	Nursing Officer
NOiC	Nursing Officer in Charge
NSSF	National Social Security Fund
OPD	Out Patient Department
PITC	Provider Initiated Testing and Counselling
PMTCT	Prevention of Mother to Child Transmission
POP	Plaster of Paris
PPH	Post-Partum Haemorrhage
RCH	Reproductive and Child Health clinic
RMO	Regional Medical Officer
TANESCO	Tanzania Electric Supply Company Limited
TB	Tuberculosis
TD	Technical Department
TEC	Tanzania Episcopal Conference
TN	Trained Nurse
TUGHE	Tanzania Union of Government and Health Employees
TT	Tetanus Toxoid
USD	United States Dollar
UTI	Urinary Tract Infection
VCT	Voluntary Counselling and Testing