Annual Report Lugala Lutheran Hospital (LLH) 2009

by Peter Hellmold

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Abbreviations (as far as not explained in the text)

Abs No	Absolute number
AFB	Acid fast bacilli
AK	Arbeitskreis
AMO	Assistant Medical Officer
AMREF	African Medical Research Foundation
ANC	Ante Natal Care (now: RCH)
ARI	Acute Respiratory (Tract) Infection
a/o	and/or
APH	Ante partum haemorrhage
ART	Anti Retroviral Therapy
ARVs	Anti Retrovirals
AssCO	Assistant Clinical Officer
BPH	Benign Prostata Hyperplasia
B/S for MPS	Blood slide for malaria parasites
Ca	Carcinoma
CCBRT	Comprehensive Community Based Rehabilitation in Tanzania
CD-4	Cluster of Differentiation-4
CHMT	Council Health Management Team
CO	Clinical Officer
CPD	Cephalic pelvic disproportion
CRDB	Cooperative Rural Development Bank
C/S	Caesarean Section
CTC	Counselling & Treatment Centre
DC	District Commissioner
DDH	Designated District Hospital
DMO	District Medical Officer
DPT	Diphtheria Poliomyelitis Tetanus (vaccine)
DSM	Dar es Salaam
Ed	Edition
e.g.	example given
EKM	Evangelische Kirche in Mitteldeutschland
EN	Enrolled Nurse
EPI	Expanded Programme on Immunization
Etc	et cetera

FBO	**Faith Based Organization**
FP	**Family Planning**
G/E	**Gastroenteritis**
GB	**Great Britain**
Gvt	**Government**
HAART	**Highly Active Anti Retroviral Therapy**
Hb	**Haemoglobin**
HC	**Health Centre**
Hep B	**Hepatitis B (vaccine)**
Hib	**Haemophilus influenzae Type b (vaccine)**
HIV/AIDS	**Human Immunodeficiency Virus / Acquired Human Immuno Deficiency Syndrome**
HMT	**Health Management Team**
HR	**Human Resources**
HSG	**Hystero-salpingography**
ICD-10	**International Classification of Diseases, 10th Ed, Version 2006**
Inj	**Injection**
IPD	**Inpatient department**
IUFD	**Intra-uterine fetal death**
IVU	**Intra-venous urography**
JEpidemiol	**Journal of Epidemiology & Community Health**
JHealthPopNutr	**Journal of Health, Population & Nutrition**
KCMC	**Kilimanjaro Christian Medical Centre**
Lab	**Laboratory**
LabAss	**Laboratory Assistant**
LabAtt	**Laboratory Attendant**
LabTech	**Laboratory Technician**
LBW	**Low Birth Weight**
LMW	**Evangelisch-lutherisches Missionswerk Leipzig**
LSHTM	**London School of Hygiene & Tropical Medicine**
MD	**Medical Doctor**
MMR	**Maternal Mortality Ratio**
MoHSW	**Ministry of Health & Social Welfare**
MO i/c	**Medical Officer in charge**
MP	**Member of Parliament**
MSc	**Master of Science**
NGO	**Non-governmental organization**
NMB	**National Microfinance Bank**
NO	**Nursing Officer**
OPD	**Outpatient department**
Op-theatre	**Operating theatre**
PEPFAR	**President's Emergency Plan for AIDS Relief**
PEM	**Protein Energy Malnutrition**
PHC	**Primary Health Care**
PICT	**Provider Induced Counselling & Testing**
PLWHA	**People living with HIV/AIDS**
PMR	**Peri-natal Mortality Rate**
PMTCT	**Prevention of Mother to Child Transmission**
PUD	**Peptic Ulcer Disease**
MAtt	**Medical Attendant**
MDGs	**Millennium Development Goals**

MTUHA	**Mfumo wa Taarifa za Uendeshaji wa Huduma za Afya**
NHIF	**National Health Insurance Fund**
No	**Number**
Op-theatre	**Operating theatre**
OPs	**Operations**
PEM	**Protein Energy Malnutrition**
PID	**Pelvic Inflammatory Disease**
PPH	**Post partum haemorrhage**
RCH	**Reproductive & Child Health**
RHMT	**Regional Health Management Team**
RMO	**Regional Medical Officer**
RN	**Registered Nurse**
RPR	**Rapid plasma reagin**
RTA	**Road traffic accident**
RVF	**Recto-vaginal fistula**
SACOS	**Savings and Credit Cooperative Societies (= community based microfinance scheme)**
SEN	**Senior Enrolled Nurse**
SIDS	**Sudden Infant Death Syndrome**
SRN	**Senior Registered Nurse**
sSA	**sub-Saharan Africa**
STI	**Sexually Transmitted Infection**
SVD	**Spontaneous Vertex Delivery**
TB	**Tuberculosis**
TIA	**Transitoric ischaemic attack**
TN	**Trained Nurse**
TSh	**Tanzanian Shilling(s)**
TZ	**Tanzania**
UN	**United Nations**
URTI	**Upper Respiratory Tract Infection**
UTI	**Urinary Tract Infection**
VCT	**Voluntary Counselling & Testing**
VVF	**Vesico-vaginal fistula**
WHO	**World Health Organization**
yrs	**years**

Signs

Ø	on average
+ ve	positive

Introductory note

There is no Annual Report of LLH from 2008. From different sides I have been asked to present a 2008 report. I arrived in Lugala mid of April 2009 and I have been appointed MO i/c with effect from 01st of May, 2009. My official introduction as MO i/c was on 17th of May, 2009.
LLH had a MO i/c until Dec 2008, followed by an Acting MO i/c until April 2009. My responsibility commenced on 1st of May, 2009.

Meanwhile and together with SolidarMed we have adopted internationally accepted Hospital Development Indicators serving as baseline and for monitoring the progress of LLH.
The data collection will start in January, 2010. I have proposed to collect data for the indicators defined retrospectively for 2009 and 2008 and to accept the 2008 figures as substitute for a 2008 Annual Report. From the side of SolidarMed the proposal was agreed on by my country coordinator. Then, the 2008 figures will form the baseline for hospital development.

Basic data of geography, population, political structure, socio-economy & health

Lugala Lutheran Hospital is located in the East-African country Tanzania, in the south of Morogoro Region and in the remoted West of Ulanga District, 2 km distant to the village Malinyi.
Ulanga West at an altitude of 200 m is embedded in the Ruaha – Kilombero – Rufiji River Basin.
The access via road to Ulanga District from Mikumi, a small town on the Morogoro – Iringa route, on a partially tarmac, but mainly poor conditioned rough road is via Ifakara, the capital of Kilombero District. The bishop of ELCT UKD (Evangelical Lutheran Church in Tanzania - Ulanga Kilombero Diocese) is residing in Ifakara and the diocesan headquarters are there.
After having crossed the Kilombero River by ferry one enters Ulanga District and there are still 4 hours to go before reaching Lugala. The condition of the road 'beyond' the Kilombero River, now exclusively rough, depends on the season and during the rains the passage might be temporarily impossible.

Ulanga District with its capital Mahenge, harbouring DC's and DMO's offices and the District Hospital, has a population of 221,103 (National Bureau of Statistics, National Population and Housing Census, 2002).
Lugala Hospital is the only hospital in Ulanga West and it is six rough road hours away from the District Hospital and the DMO's office.
Lugala Hospital has a catchment area of 100,000 population, serving mainly people in Ulanga West and the far south of the neighbouring Kilombero District, West of the Kilombero River.

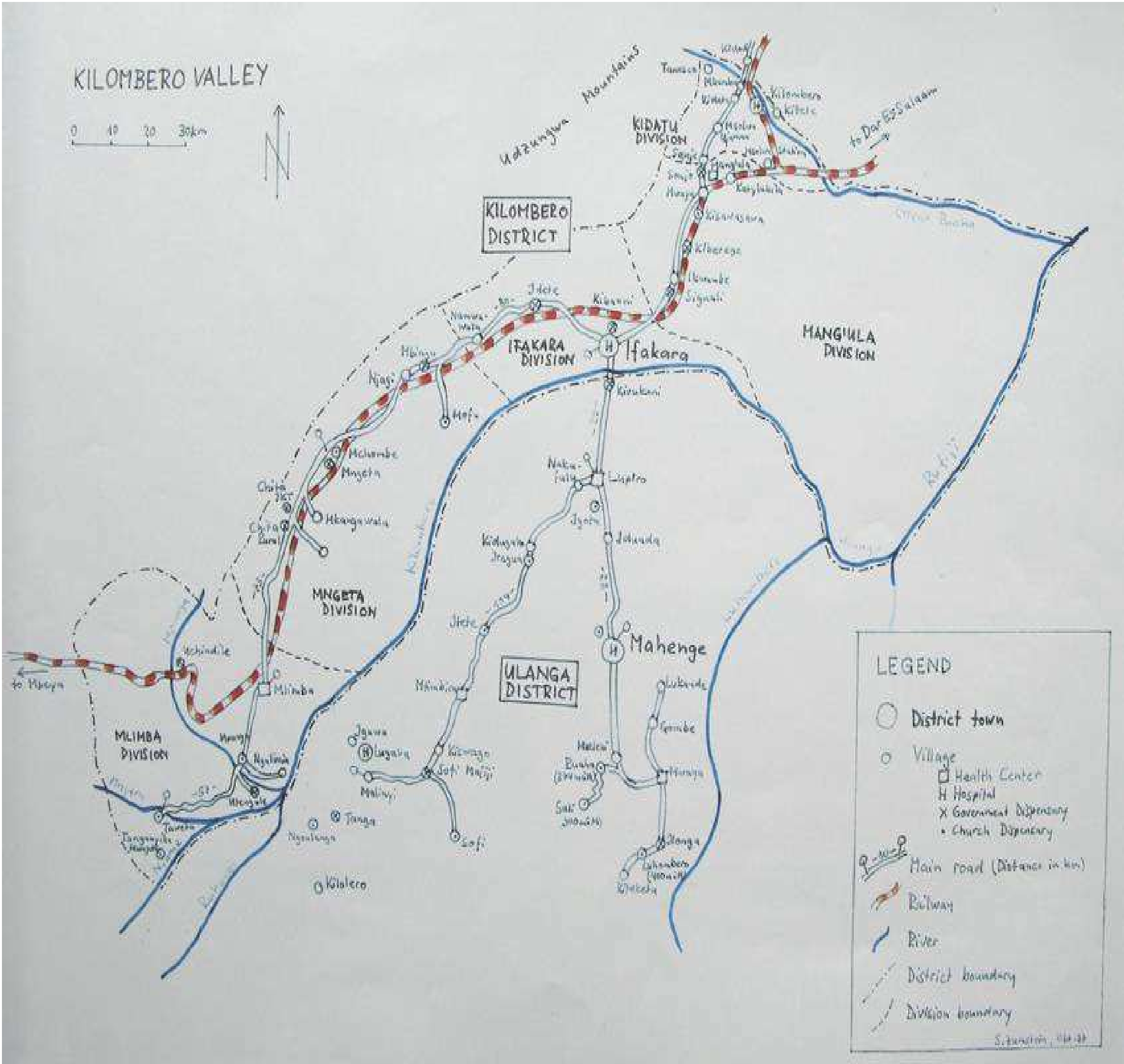
The distance from Lugala Hospital to the region's capital, the town Morogoro, is 380 km or 9 hrs by driving, if the roads are dry.

Ulanga District has a rural profile characterized by being among the lowest-income areas in Tanzania. The general infrastructure is poor, the health infrastructure weak. The far majority of the population consists of small scale farmers and subsistence peasants and their socio-economic status is accordingly. Rice is an important staple food in the lowlands along both sides of the Kilombero River. In the North-West of the district, not far from Ifakara, are some teak-wood cash crop plantations.
The overall living conditions of the people in our catchment are defined by poverty, by poor health, by a low literacy proportion and by their daily struggle for leading a life at least as economically productive as necessary for meeting basic needs and sustaining life.

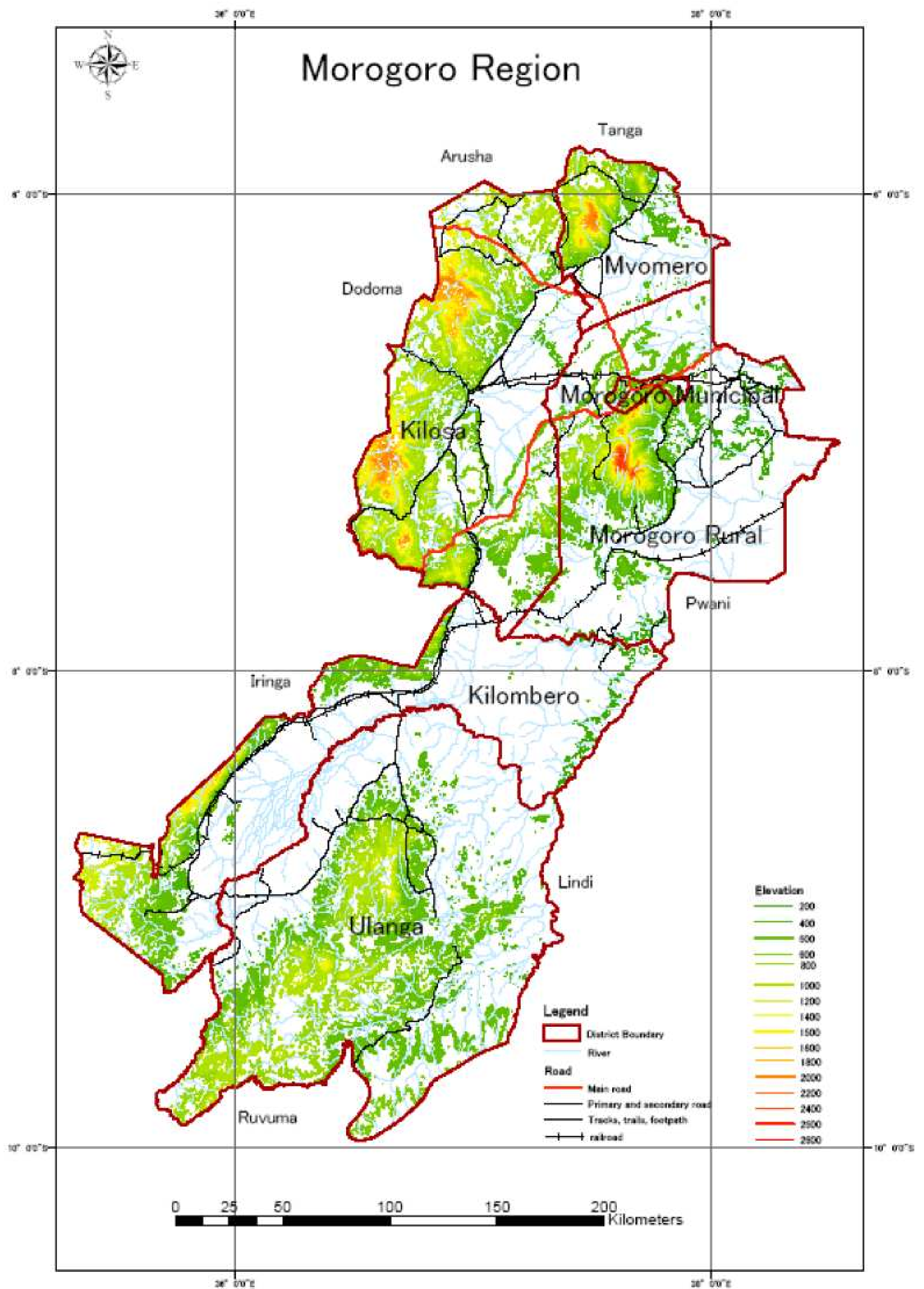
Malaria is holo-endemic and HIV/AIDS is prevalent. Infectious diseases and diseases defined by poverty are pre-dominant. Health indicators as peri-, neonatal-, post-neonatal-, infant-, child-, Under-five mortality rate and Maternal mortality ratio require a comprehensive approach to implementing sound Public Health Policies and Primary Health Care strategies.

Lugala Hospital - besides Mahenge District Hospital - has the function of a first referral level health institution within the District Health and Primary Health Care System. The geography together with the poverty of the population makes it that Lugala Hospital is de facto fulfilling the function of a Designated District Hospital (DDH) for Ulanga West and Kilombero South, covering the divisions Malinyi and Mtimbira (Ulanga West) and Mlimba as well as the southern part of Mngeta Division (Kilombero South). In Mlimba division are the dispensaries Tanganyika-Masagati and Ngalimila located. Tanganyika-Masagati is a ELCT UKD owned dispensary, and Ngalimila is a community owned dispensary, both staffed, supported and supervised by LLH.

Map of Ulanga & Kilombero District



Map of Morogoro Region



Vision

- **Lugala Hospital adopts Public Health Policies, Primary Health Care Strategies and operational guidelines as stated by WHO, MoH&SW and ELCT.**
- **Lugala Lutheran Hospital is a functional first referral level hospital for Ulanga West and Kilombero South and an integrated component of public and community health services.**
- **Lugala Hospital meets the basic medical needs of its target population.**
- **Lugala Hospital implements an inter-sectoral, community-based and health-oriented approach to promoting health, preventing disease, effectively managing disease and facilitating the rehabilitation of its clients.**
- **Lugala Hospital makes efficient use of limited and strained resources.**
- **Lugala Hospital delivers quality service aiming at improving the health status of the socio-economically marginalized rural population of Ulanga West and Kilombero South.**
- **The improved health status of the population in the catchment area is verifiable by monitoring relevant health indicators and by on-going and ex-post evaluations.**

Mission

Lugala Lutheran Hospital's approach is horizontally and the focus is on institutionalized good relations with ELCT UKD and ELCT headquarter's health department, on comprehensive cooperation with the Government, particularly the District Health Services, relevant organizations of the Civil Society and Partners in Development. Lugala Hospital should aim at delivering comprehensive health care under informed participation and consent of its target population and pay respect to the culture and traditions of the community. The service of Lugala Hospital should not only be confined to the treatment of sickness and disease but also be directed towards the improvement of health determinants. Lugala Hospital should address relevant health problems of the population, be need and demand responsive and adopt a holistic and integrated approach as base for planning and implementing scientifically sound public health policies resulting in health system and health service development. Technically, methods and interventions should be practically applicable and socio-culturally acceptable. Lugala Hospital services should be accessible and affordable and take respect to medical ethics, particularly equity (pro-poor orientation) and patients' autonomy. Lugala Hospital services should make a significant contribution to the protection of vulnerable groups.

Lugala Hospital should as part of the Tanzanian health system, whose goal is the promotion of health of the population, channel its activities, direct them to and focus on preventing the emergence of health problems, correcting them when they have occurred and limiting their consequences. The interrelated elements of Lugala Hospital's integrated approach are devoted to producing

health actions and outcomes and lastly having an impact on population's health.

LLH's progress is going to be monitored. Process and outcome indicators will be defined to measure evidence based results. The efficient use of strained resources and sustainability criteria will guide the implementation process. The focus will be on quality service delivery and care, on safeguarding motherhood, child birth and the peri- and neo-natal period, on submitting comprehensive and effective service to PLWHA, on extending and strengthening Public Health outreach including supervision of Tanganyika-Masagati and Ngalimila dispensaries and on creating and maintaining a network of good relations with the owner of the hospital, ELCT – UKD, as well as with ELCT headquarters, Local Gvt Authorities, particularly DMO's office and DC's office in Mahenge and DMO's office in Ifakara, RMO's office in Mororgoro and last not least with all Partners in Development, at national and international level, who share the same goal and feel jointly obliged to the efforts undertaken to creating better living conditions for the people in Ulanga and Kilombero.

LLH's service delivery is in line with *Millenium Development Goals (MDGs)* by UN (MDG 4 'Reduce Child Mortality', MDG 5 'Improve Maternal health', MDG 6 'Combat HIV/AIDS, malaria and other diseases') and the most recent *Health Sector Strategic Plan III (2009-2015)* by Tanzanian Gvt . As FBO (Faith Based Organization), owned by ELCT – UKD, LLH aims to implementing 'ELCT Health Policy and Operational Guidelines (2006)'.
Lugala Hospital's integration into International Public Health Policies and National Primary Health Care Strategies means that its service delivery is directed towards user friendly primary care services and quality of care. As an important part of the health structure in the district LLH promotes community involvement.

Networking

Lugala was a rather isolated entity in the rural Tanzanian periphery. This situation has changed completely.

The relation with the legal owner, the ELCT UKD, was notoriously bad, as e.g. laid down in a series of documents presented at the Executive Council held 16th /17th of April, 2009, at Mkamba.
LLH is an integrated part of ELCT UKD with the bishop as the overall in charge of the diocese. Without paying respect to this fact, development and local ownership can never take place. The diocese tries to create a supportive environment for the development of the hospital but is limited in its means. The main problem is always the same, the endless 'dance around the golden calf': money. ELCT UKD is definitely one of the poorest ELCT dioceses in the country and the hospital is always working with a financial deficit. The diocesan leaders know it and take it into account but some members of the Executive Council seem not to know or not to understand it: there is a prevailing opinion that the financial constraints the diocese is facing could easily be overcome by using Lugala as a source for income generation.

The target group of Lugala, the rural population, is poor and cost sharing can therefore only cover a rather small part of the hospital's expenses. Our prices for service can never be set to the level e.g. St Francis DDH in Ifakara has. St Francis' catchment is basically urban with an economically much better off population. On the other hand are government funds which are assigned to Lugala not always as reliable as they should be (see 'Sources of Income'). This situation, superimposed by ever raising costs for drugs, spare parts, sponsorships etc, creates a high dependency from partners in development whose contribution is in many respects, but particularly in terms of finance significant, e.g. the support submitted by EKM. Without the regular yearly € - transfer by EKM Lugala would be completely bankrupt.

By now, ELCT UKD and LLH work together in mutual respect, both sides trying to promoting partnership in developing appropriate problem solving strategies.

A relation between Lugala and ELCT headquarters Health Department was virtually not existing. When I took part, together with our Senior AMO, who is at the same time the Diocesan Health Secretary, in the annual meeting of MO i/c and Health Secretaries of ELCT dioceses in Moshi end of May this year I became aware that ELCT headquarters offer country wide programs and facilitate cooperation with their hospitals. Those programs are covering subjects like e.g. HIV/AIDS, Malaria, Drug Management & Supply.
I was surprised realizing that ELCT hospitals from all corners of the country, from Nyakahanga and Ndolage to Bumbuli, from Machame to Matema, were in one or the other way involved in at least one of the programs. Only one name was never found: Lugala.
Meanwhile we cooperate closely with the 'Information & Communication Technology' section. We have been supported with some hardware components. The introduction of the accounting software 'web erp' has been announced and will create another field of cooperation.
We have set up a team for the 'Palliative Care' program of the headquarters. The team just returned from training in Arusha.
Moreover, we are building up a common library for LLH and Lugala Nursing School and are replacing the outdated and dusted library by modern books incl e-learning. The ELCT headquarters submitted valuable books to begin with and announced that the support will continue.
Not all programs of the headquarters are suitable for Lugala, e.g. the program promoting cooperation with local SACOS has not been taken up by our workers who see the local SACOS with some skepticism. LLH has a small scale loan scheme existing from before (max 500 000 TSh / worker) and the ELCT UKD has launched a program in cooperation with CRDB Kilombero which meets the interest of those who are in need of higher amounts.
The question is not to getting involved in all programs offered by the headquarters but to cooperating in fields where interests meet.
Sometimes the headquarters could be higher organized and communication fails now and then, but these are minor problems to overcome if partnership has been established.

The relation between Lugala and government institutions at all levels were notoriously bad. The RMO had to force members of the RHMT to visit Lugala

because they intended to refuse having experiences with former visits in Lugala in mind. This situation has changed drastically. In our modern world in order to achieve common goals, shared targets and stated objectives partners in development should work together, e.g. government, NGOs, churches, other members of the civil society. Cooperation with the government is not always easy, but the willingness to creating a favorable and supportive environment for communication and cooperation makes the difference and remains the cornerstone for achieving progress together.
Our main partner is the DMO's office Mahenge and the CHMT Ulanga. The DMO is the overall i/c of health in the district and the CHMT has a supervisory function for LLH. Regular visits of DMO and CHMT members are now 'business as usual' in Lugala. The hospital and its workers are involved in all relevant activities undertaken by the district. In November we have commenced an AMO exchange program with District Hospital Mahenge on a yearly rotational basis. There is an urgent need to introduce our matron to the governmental data recording system (MTUHA).

The RHMT is fulfilling its supervisory responsibility in Lugala now regularly and short ways of correspondence have been established. From our side we participate quarterly in the maternal and peri-natal death audits arranged by the region.

District Commissioner, who called Lugala Hospital the most important social institution in Ulanga, and the member of parliament are now regularly guests at Lugala.

Beside the SolidarMed / PEPFAR / TUNAJALI engagement in line with what can be called an appropriate modern approach to burning health needs and demands, Lugala Hospital was a rural hospital rather cut off from the actual health policy dialogue. The isolation was not defined by the remote geographical location but the lack of cooperation of the hospital with all relevant structures of Local Gvt Authority, namely the DMO's, but also the RMO's office. The relation to the owner, the ELCT-UKD was not even better as already mentioned . This is allowed to say, because it is documented. In fact, the Diocese didn't feel ownership any more. In other words: Lugala Hospital was 'steering in its own soup'.
The lesson learnt should be that in the globalized world with sound International Public Health Policies and convincing Tanzanian Gvt Health Priorities and Strategies a self chosen isolation has negative draw backs. Cooperation is of advantage for all, Lugala Hospital, ELCT-UKD, Gvt and Partners in Development.

Partners in development (formerly called: donors)

EKM

EKM is the main external supporter of LLH, in all respects, financially and concerning supply of medical equipment. The relation between EKM and LLH has grown organically over many years and in 2010 there will be the 20th anniversary of the 'Lugala Arbeitskreis(Lugala AK)', a body of volunteering persons channeling the on-going support and facilitating intercultural exchange.
EKM compensates with a substantial amount the yearly gross deficit of the hospital and enables us to purchasing drugs from MSD and Action Medeor. In fact in 2009, 2/3 of the EKM money has been used for buying drugs. The expenses for drugs are one of the major headaches one has in Lugala.

But much more support comes from EKM.
A load of teaching material (books and e-learning material) paid from the outcome of an ecumenical pentecostal service, has - together with other equipment - arrived. For spring a container with x-ray machine, OP-theatre table, monitoring devices and hospital beds has been announced.
EKM via Lugala AK is also submitting two sponsorships, one for a MD in Moshi and one for a NO in Ifakara.
In short: Without the striking commitment of EKM and Lugala AK we could run the hospital only on a very basic level. The EKM (Lugala AK) support is significant and substantial for Lugala and highly appreciated. We are thankful for that.
Above all, it's not only about technical and financial cooperation. The forum for mutual inter-cultural exchange with regular visits from both sides surely has created a favorable environment with a solid foundation and a good prospective. Lugala AK invites every other year two members of Lugala staff for a three weeks visit to Germany offering a balanced program of social, cultural and professional experiences.
After change of MO i/c in May this year two representatives of Lugala AK have visited Lugala. Confidence building measures from both sides have taken place. Ways of communication are short.

LMW

LMW supported LLH in 2007/2008 with a staff house consisting of four flats. A final financial report as agreed on with LMW has not been submitted by LLH after completion of the building which latter was urgently and highly needed considering the extreme scarce resources of housing in Lugala. During a visit of LMW / EKM members in Sep 09 the director of LMW reminded the hospital to submitting the respective report.
Meanwhile we reviewed the respective file and found that ex-post compilation of a final financial report is anything else than easy facing the scarcity of supporting documents the file contents.
In future it is unquestionable that those reports have to be and will be submitted in time. How else shall we expect further support from our partners if feed back, transparency and accountability are missing.

We, but particularly I'm anxious looking forward to the administrator and accountant whose arrival is expected in March 2010. Lugala Hospital has no administrator and Lugala Hospital has no accountant. There is a young and very committed assistant accountant who is endlessly overworked in the same way as other HMT members who try to compensate the missing administrator and accountant. One can not run a busy hospital satisfactorily with those two key functions being vacant. My medical work is hardly compromised by the necessity to fulfill administrative requests from all sides and spending the rest of my time in meetings and with reception of visitors (of course, as said before, they are warmly welcome but they cost time). I hope for a constructive cooperation with the administrator and accountant sent by LMW and will do everything I can do to making his and his wife's stay in Lugala a success story. I look forward to Dr Gundermann. Our hospital, our patients, the diocese deserve a professionally managed administration and a convincing financial management. If it works out well this contribution by LMW cannot be overestimated.

SolidarMed

SolidarMed supported LLH with SMART (SolidarMed Anti-Retroviral Therapy) program since 2005. With the country office based in Ifakara, SolidarMed gives support and back stopping to counseling and diagnosis, to treatment and care of PLWHA. SolidarMed has substantially contributed to the establishment of the CTC – clinic which is integrated into the OPD-services of Lugala Hospital. SolidarMed accompanies, monitors and supervises - together with DAC - the activities of Lugala CTC –clinic and hence, assures quality in line with NACP-guidelines and national standards as well as international standards for resource strained settings. SMART is fully integrated in NACP. The SMART data base was developed as a key tool to monitor the SMART-project's outcome.
SolidarMed administers also the PEPFAR funds for Lugala administered via TUNAJALI in Mororgoro. Lugala Hospital has up to now not the capacity to administer the funds in fulfillment of the accounting criteria of TUNAJALI. Until now it is SolidarMed guaranteeing the financial base for Lugala Hospital's CTC services.

Over time and with increasing enrolment of ART case fatality decreased. In Lugala Hospital, at the end of June 2009 there were more than 361 patients on ART.
Besides Lugala Hospital meanwhile also dispensaries conduct counseling and testing and moreover, two health facilities in Ulanga West are now authorized to dispense ARVs, Mtimbira HC and Itete dispensary (so called 'refill centres'). However, Lugala Hospital remains the only health institution in Ulanga West which is able to perform the basic diagnostic before commencing ART, particularly CD-4 count, biochemistry and thorax x-ray.

After VCT had become an established routine at Lugala Hospital we focused on PICT to addressing pregnant mothers. The approach resulted in a substantial contribution to PMTCT.

By now, counseling and testing, treatment and care of HIV/AIDS patients is a well established decentralized routine provided by Lugala Hospital and primary care facilities within the referral area of the hospital. Emphasis is put on quality service and follow up of HIV+ patients, particularly those 'lost to follow ups' who might contribute to generation of resistant virus sero-variants or strains.

The success was achieved through mutual cooperation between SolidarMed and the DMO's office in Mahenge and through SolidarMed's accountability concerning the financial administration of funds made available by PEPFAR/TUNAJALI.

SolidarMed supports in particular: out- and in-patient treatment with ARVs; food supply; travelling costs for initiating ART and 6 monthly CD4 control; salaries for staff: 2 COs, 1 nurse, 2 MedAss, 1 LabTech, 1 data clerk; Lab service for PLWHA; reagents for PARTEC CD4 counter; stationaries; CTC outreach; audits. The budget for support approximates 35 Mio TSh/yr.

In April 2009 SolidarMed extended the spectrum of activities by sending a surgeon who is also specialized in Public Health to Lugala. By the end of 2009 the Lugala Hospital Development Plan (2010 – 2013) has been launched awaiting the partners' signature.

CSSC

The outcome for LLH of cooperation with Christian Social Service Commission (CSSC) - an inter-confessional body with zonal office in Morogoro - is up to now not measurable. We hope for middle term facilitation and assistance in coming to a 'Service agreement' with the district enabling us to be re-imbursed for treatment of defined groups of clients as under fives, pregnant women and patients with chronic diseases who are exempted and treated for free at Gvt institutions but are charged at LLH. Service agreement could contribute to establishing a source of regular and reliable basic income for LLH. But there is still a way to go until districts have internalized the respective policy.

A short term support submitted by CSSC could be the grant of one or two sponsorships for students of Lugala School of Nursing. But except 'a boost of good words' nothing has come out yet.

Belgish Technical Cooperation

Belgish Technical Cooperation (BTC) has supported LLH twice in the past. The first time in 2007: 'Expansion of Water Supply capacity at Lugala Hospital'. The second time in 2008: 'Upgrading of Infusion Unit at Lugala Lutheran Hospital'. At moment BTC is not ready to submitting support for another small scale project because BTC has never received any report by LLH with regards to the

last project as it was explicitly agreed on per contract signed between BTC and LLH on 11th of Aug, 2008.
I have reviewed the file. Unfortunately, there is not a single supporting document about how the money was spent except one handwritten note. If I would be able to submitting the requested report retrospectively, even if it, of course, doesn't meet the deadline of "within one month of the end of the intervention" any more, I could appeal to the willingness of BTC to supporting our hospital in future again. Now, I have no other way than to submit the last evaluation report of the infusion unit by St Luke Foundation from April 2009 stating that LLH produces pyrogen-free infusions fulfilling hygienic standards and beg BTC's pardon. It is short sighted to accept money from donors and not to be accountable for it despite of clearly written and signed contracts. Understandable, those donors will look for other partners in future.

GLRA (DAHW)

In the past the 'Deutsche Lepra- und Tuberkulosehilfe e.V.' (German Leprosy and TB Relief Association, GLRA) formerly 'Deutsches Aussätzigenhilfswerk (DAHW)' supported Lugala Hospital in different ways, particularly outreach/supervision. The policy of DAHW considers Lugala now to being fully integrated into the National TB- & Leprosy Program. DAHW support is given to all Tanzanian Health Districts (District TB- & Leprosy Coordinators) but also restricted to it.
The former direct support was more favorable for Lugala, the actual policy is politically correct.
At least the DAHW was so generous to supplying us once with some spare parts for the motorcycle of our TB- & Leprosy outreach program.

DLM/DMC

Danish missionaries built up Lugala Hospital in the 1950ies. I tried to convince Danish Lutheran Mission (DLM) to remembering their great tradition in Lugala by joining our 'Partners in the North (EKM, LMW, SolidarMed)' and to become a partner again. The Director of Danish Missionary Council Development Department (DMCDD) whom I met, was in favour of it and tried his level best to bring the issue forward. I also asked ELCT UKD, LMW and EKM to facilitate. The outcome was prosaic.
On Nov 19th, 2009, almost 6 months after I had started the initiative, I received a letter from the Head of DLM's Department for International Mission, saying: "From our side we are happy to hear that the hospital is functioning well and improving. We are hoping that it can continue to the benefit of the local population.
It is clear that the Danish Lutheran Mission does not have resources in terms to put in the hospital either in form of doctors and nurses or finances. However, DLM is willing to consider to find a person to participate in strategic planning group, if it is . . . not too late already."

At least I could retire via director of DMCDD technical drawings of buildings built earlier in Lugala by Danish missionaries. They are at this time at hand of

the engineer who will be send via Senior Expert Service (SES) in March 2010 to Lugala to assessing hospital and dispensaries' as well as staff buildings and developing proposals for rehabilitation.

Bed grants, arrears, Basket Fund

Bed grants

Lugala has 57 officially by the government recognized and financially supported beds. De facto LLH has 137 beds and seasonally variating between 140 and 180 patients. Because LLH is fulfilling the task of a DDH for Ulanga West and Kilombero South it would be fair if the number of beds recognized as official beds by the government would coincide with Public Health criteria. WHO sees 1 hospital bed per 1000 population as adequate ratio. Our catchment is approximately 100 000 (104 704, census 2002). We applied now for 100 beds granted. This was done after intense lobbying including DMO, DC. MP. The application is fully backed up by the diocese. The problem is that three different ministries in DSM are involved in the procedure (MoH&SW, Ministry of Finance and Ministry of Human Resources). The acknowledgement of 100 official beds is only the first step. The step following will be the induction of the money flow, based on 100 beds granted, to Lugala.

Arrears

Payment of salaries for hospital staff was in line until Dec 2007.

Arrears for qualified and un-qualified staff were overdue from Jan 2008 to July 2008. Based on 57 beds granted Gvt should have paid arrears for 22 qualified staff members, but in fact paid arrears only for half of the qualified staff (11 staff members). Moreover, the arrears for 11 staff members were underpaid. During that period, the staff was underpaid by both, the Gvt and LLH.

For the period Aug to Nov 2008 22 qualified staff members were recognized by Gvt as being eligible for being paid arrears by Gvt. Those arrears were transferred to LLH, but LLH staff was paid less by LLH than LLH received from Gvt. Arrears have then been paid in Dec 2008.

From Dec 08 until July 09 arrears were paid regularly by the Gvt (22 qualified staff) and LLH for some of the qualified (because LLH has more than 22 qualified staff members) and un-qualified staff.

From Aug 2009 to Dec 2009 areas have not yet been paid.

The arrears not having been paid from Jan 2008 onwards caused increasingly social unrest among both, the qualified and the un-qualified staff. The HMT has decided to pay the outstanding arrears. A working group was established to calculating them. It took almost two months and was a tiresome undertaking to

getting an overview about the payments due. It needed several consultations with the MoHSW in DSM about correct calculations and also with the neighboring St Francis Hospital in Ifakara about experiences and practice there. Lastly we could calculate the areas for both, the qualified and the un-qualified staff from Jan 2008 until July 2008 based on Gvt salary scale. Despite of two cadres who received a flat-rate lumpsum (MAtt 200 000 TSh and watchmen 100 000 TSh), the hospital budget was stressed by about 20 Mio TSh when the arrears have been paid on 15th of Jan, 2010.

From Jan 2010 onwards employees will be paid due to gvt salary scale.

Basket

The alignment of planned activities and allocation of funds was ad odds.

The last in line 'allocation of funds / implementation of activities in time' was in quarter 1 and 2 of the financial year 2007/2008 (= July to Dec 2007).
For the 3rd and 4th quarter of the financial year 2007/2008 (= Jan to June 2008) Basket Fund money has up to now not been transferred by the District to Lugala's NMB Account in Ifakara. Funds for the following 2 quarters (= 1st and 2nd quarter of the financial year 2008/2009 = July to Dec 2008) has been transferred, but with the very money activities planned for the 2 previous quarters (3rd and 4th quarter of the financial year 2008) have been implemented. Activities planned for July to Dec 2008 (= 1st and 2nd quarter of the financial year 2008/2009) have not yet been implemented.
To overcome the chaos we have brought planned activities and funds in line again from the 3rd and 4th quarter of the financial year 2008/2009 (= Jan to June 2009). End of Dec 2009 we accounted for the very period.
In other words:

- **Basket Fund money for the 3rd and 4th quarter of the financial year 2007/2008 is missing until today. We had several meetings with health authorities from the district in order to solving this problem. The DMO announced his support stressing that submission of basket fund is not a favor from the government but a right from our side. The person directly concerned at district level with the administration of the basket advised us to forgetting about the two missing quarters and 'to looking forward'. He put the blame a level higher and said that the district never received any money for those 2 quarters from the central level.**
  Let me state, that the basket is fed by the International Community, all of them Governmental Partners in Development, specifically: the governments of e.g. Germany, The Netherlands, Switzerland, The United States, GB etc. Is it a realistic assumption that the International Donor Community didn't transfer the money to the TZ Ministry of Finance ?!
  I leave that question open.
  To being realistic I believe that we can forget about the money. For Lugala it means a substantial loss of 16 Million Tanzanian Shillings.
- **Despite of having re-aligned activities and funds, we are still behind with the Basket Fund time schedule. Now, in Dec 2009, as mentioned, we account until June 2009. If the basket money for the 1st and 2nd quarter 2009/2010 (July to Dec 2009) will be transferred hopefully at the**

beginning of Jan 2010, we'll look for pushing through the activities speedy in order to come definitely in line (planned activities/ allocated money/ time schedule) during the first half of 2010.

Miscellaneous financial issues

Service contract with CCBRT

The contract was signed between LLH and CCBRT on 20.11.2008 for a period of 3 yrs without any remark on agreed terms of termination.
The aim of the contract was 3 times/yr check up of medical equipment at LLH. The service delivered was so far not to complain about, but most of the diagnostic can be done by our hospital technician. The repair of defect items and devices would have made the difference. But even with the service contract repair was still left with us.
Thanks to the understanding of our situation and friendliness by the Director of CCBRT we were able to terminate the contract. Savings for LLH: 1,5 Mio TSh/yr.

Formerly employed accountant

An accountant who was – some time in the past - employed by LLH on a one-year contract basis but has been dismissed already after three months puts a financial burden onto us by now. The Labour Office decided that LLH has to pay him a whole year's salary because a certain legal form requirement was not fulfilled by LLH at the time of dismissal. To avoiding a tiresome and expensive court case with very likely no better outcome for LLH the HMT decided to do the payment as stated by the Labour Office in order to settle the unpleasant issue.

Retired anaesthetist

The terminal benefits of an anaesthetic nurse who worked for LLH for almost 40 years and whose retirement was overdue for two years now have been paid.

OPD

OPD as a whole is under restructure. Aim is client-centred quality service delivery and an organized patient flow with separation of OPD and IPD services.

- **Pharmacy is under complete restructure. Up to now the whole logistic chain from the proposal of what drugs should be ordered over purchase of drugs up to the administration of the drug store and lastly drug dispensing was in a single hand. Moreover, there were some superposing and colliding interests.**
  The restructure followed WHO and MoH&SW recommendations. Core piece is a newly established Therapeutic Committee consisting mainly of heads of departments, functional units and wards. The Therapeutic Committee meets regularly three monthly to discussing the drug order

and can meet ad hoc if need arises. The Therapeutic Committee defines the drug policy of the hospital. By now, our drug policy follows standard guidelines as laid down in the Tanzania National Formulary, 2nd Ed, 2005. Rational drug use, cost containment and efficiency are the stated objectives the Therapeutic committee aims to implement.
Beside the Therapeutic Committee four persons are now responsible for the different parts of the drug chain: the Senior AMO as purchasing officer (three monthly trip to DSM: MSD & Action Medeor), the assistant matron as administrator of the main drug store giving out drugs weekly to the dispensing room which is staffed by 2 experienced nurses and allocated at the entrance of the OPD (reception area).
Prescribers in Lugala (COs, AMOs, MD) are obliged to following the Standard Treatment Guidelines, 3rd Ed, 2007, by MoH&SW.
The prescribing practice in reference to the guidelines is monitored daily in the clinical meeting which has the function of a quality circle. Deviations from the guidelines needs evidence based explanation by the clinician concerned.

The rationale behind those changes:

- **We cannot run the hospital without drugs. The rural population of Ulanga West and Kilombero South is poor and can only partially contribute. The opportunistic costs for the fact that we are spending about 2/3 of the financial support submitted by EKM for drugs are unacceptable high: any € spent for the consumable 'drug' can not be spend for other activities or investments.**
- **Gross overprescribing is one out of a wide spectrum of reasons for irrational drug use. That applies particularly to un-appropriate prescribing of anti-microbial drugs. One reason for it is poor knowledge of prescribers. If a prescriber is lacking a sound medical knowledge he/she tends to prescribe un-critically.**
  I have just compiled an MSc thesis for LSHTM and found that 92 % of all anti-microbials in a Tanzania 2nd level referral (regional) hospital are prescribed in-appropriately.
  We have adopted a stringent hospital policy aiming to retain costs for drugs. Less drugs but prescribed rationally mean better service for the individual patient and make at the same time a contribution to Public Health in form of containment of resistant microbes and efficient use of expensive resources.

- **Another area under current re-organisation is the record keeping system. In fact there is no system. Up to now there was one completely overworked Nurse Attendant trying her level best by being the cashier and at the same time running back and forth to search for patient's records.**
  Fact is that at least half of OPD patients receive a new OPD-booklet with every new visit because the old one(s) can not be found. That is for the disadvantage of both, the patient and the doctor. It is substantially different whether a doctor can get orientation about the patient's

medical history by a short review of the patient's records or whether he/she has to start every time at point zero.
We have employed a cashier now. A second person will be solely responsible for the records. All records of the past five years will be reviewed and a reliable system of record keeping will be implemented.

- **A new CTC clinic with 2 rooms for counselling, 1 room for data clerk, 1 room for record keeping and waiting zone is under construction. Opening of the new CTC clinic in one month time is a realistic assumption. One of the then vacant rooms at OPD will harbour NHIF (Bima) office.**
  The new CTC clinic has been made possible by SolidarMed and TUNAJALI who agreed on extention.

IPD

We have joined a small until then un-used room together with a patient's room at a strategic point between OP-theatre, in-patient wards and maternity. The joined rooms have been renovated and are intended to harbour a 'Post-operative & monitoring unit'.
Rationale:
It is known for long that patients of hospitals in countries with weak health infrastructure are only rarely dying on the Op-theatre table. But they die afterwards when brought back to overcrowded wards and lacking appropriate monitoring with - in case - timely intervention and professional follow up. Rural African hospitals started already in the 1980ies to have such life saving units but Lugala has not. Not at least with broadening the spectrum of operations offered at Lugala a monitoring unit for post-operative and critically ill patients is going to fulfil nothing else than basic standards.
In 2009 two NOs have been trained in Intensive Care at Malawi School of Anaesthesia, Kamuzu Central Hospital, Lilongwe.
Monitoring devices have been said to arrive with a container in about May 2010. They are donations from Torgau Hospital in Germany. In fact, in terms of medical hardware, Torgau Hospital which works closely together with Lugala AK, is our main supporter. We can call it 'The partner hospital of LLH'. The matron of Torgau is the driving force behind. Unfortunately she is going to retire soon. Hopefully after retirement she can continue at least some of her good work for Lugala.

Maternity

Safeguarding pregnancy, childbirth and early infanthood is the aim and the rationale of a hospital's maternity ward.

Death from maternal causes represent the leading cause of death among women of reproductive age in most low- and very low income countries.
5,8 % of women in poor countries die due to complications related to pregnancy and childbirth.

Maternal service in poor countries focuses on reduction of maternal and peri-natal mortality.

- **A maternal death is defined as the death of a woman while pregnant or within 42 days of termination of pregnancy, irrespective of the duration and site of the pregnancy, from any cause related to or aggravated by the pregnancy or its management, but not from accidental or incidental causes.**
- **Official figures of MMR in Tanzania: 529 maternal deaths/ 100 000 live births in 1990; 578 in 2005.**
  448 maternal deaths/ 100 000 live births were found in a study in rural Tanzania (International Journal of Epidemiology, 2000, 29: 107 – 112).

- **Perinatal Mortality includes fetal deaths (still births) of more than 28 weeks of gestation and deaths occurring within the first week of life (early neonatal deaths). Both issues are considered preventable.**
- **Figures for PMR vary for rural Tanzania:**
  27/1000 births (56% still births; 44% early neonatal); J Health Pop Nutr, 2003 Mar; 21(1): 8 – 17.
  41/1000 births; J Epidemiol Community Health, 2008; 62: 960 – 965.

MMR & IMR are indicators of quality of prenatal, obstetric and neonatal care which also reflect the maternal health and socio-economic status in an area.

In Lugala we had problems with preventing maternal and peri-natal deaths earlier in 2009. One reason was that the basic monitoring tool for safeguarding pregnancy and childbirth, the partogram wasn't used as it should have been. Meanwhile, we have overcome those problems. By now, the partogram is applied thoroughly. Another reason were communication problems between midwives and doctors and doctors and midwives. That problem has also been tackled. A third problem was lack of adequate equipment, e.g. appropriate suction catheters and ambu bags for resuscitation of the newborn. This problem has been partially solved, equipment needs further improvement.
A remaining problem, a general and not only a maternal one, which can only be addressed in a long term Public Health approach is the fact that the life of our target population is largely defined by poverty and by a high percentage of illiteracy with the outcome of people coming late, often too late to the hospital. No problem is in Lugala the time elapse between decision for a Caesarean section and the skin cut by the surgeon. Even at night the Op-theatre team is reliable and quick.

OP-theatre

The spectrum of operations offered has been expanded. E.g. resection of goitres, prostatectomies, repair of VVF/RVF are now operations offered in Lugala on a regular basis.
Nevertheless we have extended the cooperation with the flying doctors' service by AMREF. The reason is that the visits by flying doctors are exclusively advantageous for Lugala. They facilitate exchange of ideas, usually the flying doctor comes with some small scale support e.g. drugs or surgical suture material and a minor financial outcome results as well.

The Op-theatre is in need of an autoclave. We have two of them. One is out of order and the other one has intermittently technical problems. Without autoclave we can neither sterilize instruments nor gowns and therefore not perform operations.

Team spirit in the OP-theatre is excellent. As the team spirit of the hospital staff in general, the professional and ethical conduct and the overall commitment in Lugala is a striking feature and exceptional compared to all what I experienced in sSA in 18 years since 1983. During that time I worked in six different African settings: 1 private hospital, 2 government hospitals, 1 catholic hospital and in governmental health administration. The working environment was also favourable in the catholic hospital. But in Lugala it is the best I have ever experienced. Therefore, working at Lugala is a pleasure to me.

X-ray

The x-ray section is depending on an old machine from the former German Democratic Republic (GDR), partially supplemented by SIEMENS parts. The machine is until now working reasonably and produces pictures which are not of high quality but good enough for our purpose. But nobody knows for how long the machine can still work.
Another machine, "donated" from USA, fulfils the criterion of medical technical waste. We have discarded it.
There is the offer from the matron of Torgau of a technically sound PHILLIPS x-ray machine which could arrive with the container mentioned in May 2010. We have communicated the technical details with the hospital technician inTorgau and we have a company in Tanzania at hand which could install the machine. The PHILLIPS machine can be considered an investment into the future for Lugala.

Outreach

CTC outreach

We have together with SolidarMed, who is paying for it, restructured the CTC-outreach. After we have, in agreement with the DMOs offices in Mahenge and Ifakara, extended our outreach to the refilling centres Mtimbira and Itete and lastly to Mlimba, we will now also cover dispensaries of the two divisions in the vicinity of Lugala, Malinyi and Mtimbira: the dispensaries Sofi, Malinyi, Igawa and Tanga.
After having received several times patients from the far distance of Mlimba division, namely the catchment of T-Masagati, who were not adherent because they were poor and the distance to Lugala big, we have decided to start ARV-distribution there. Because the professional infrastructure of both places, T-Masagati and Ngalimila is still too weak to function as refilling centres, the outreach will be done by an experienced CO from Lugala who will 2 x three monthly during the rainy season and 6 x monthly during the dry season make a field visit at T-Masagati and Ngalimila and dispense ARVs there. We hope to improve compliance that way.

TB- and Leprosy outreach

The program is running well and has the following objectives:

- **Follow up of defaulters, lost to follow-ups, bed-ridden patients and patients who died**
- **Tracing of family members of patients who develop signs and symptoms of TB**
- **Provision of drugs during the visit**
- **Monitoring compliance and drug adherence**

Unfortunately as already mentioned the DAHW is not longer able to supporting our TB- & Leprosy work. All support is channelled via District TB- & Leprosy Coordinator. Bottlenecks are there. The success of anti-TB therapy stands and falls with compliance and drug adherence. It has happened throughout the last nine months that we hospitalized patients for DOT (Direct Observing Therapy) but we were not in the position to supply the drugs whose consumption we were supposed to observe directly.

RCH (formerly ANC) outreach

The RCH outreach into a remoted area of Malinyi Division, which is known for a high prevalence of women presenting with obstetric complications was up to now done by a NO who is not a midwife. This will change in future: a midwife who will be supported by LLH in acquiring a driving licence for a light motor cycle will conduct the outreach.

Staff

LLH current staff list:

MD	**1 (expatriate)**
AMO	**3 (1 up-graded Aug 2009, sec by DMO)**
CO	**7 (1 up-grading in anaesthesia)**
AssCO	**2 (1 Tanganyika-Masagati)**
SRN	**1**
RN	**14**
SEN	**2**
EN	**9**
TN	**1**
MA	**17 (1Tanganyika-Masagati, 1 Ngalimila)**
LabTech	**2**
LabAss	**2**
LabAtt	**1**
Radiographer	**1**
AssAcc	**1**
Data clerk	**1**
Carpenter	**1**

Driver 1
Mechanic 1
Cleaner 1
Watchman 6
Chaplain 1

Students supported by LLH
1 MD (2nd yr), KCMC Moshi, sponsored by EKM
1 AMO, Ifakara, sponsored by SolidarMed
1 CO Anaethesia, KCMC Moshi
11 RN Ifakara (1 sponsored by EKM)
1 RN DSM
3 RN Ilembula
1 RN Muhesa
12 Garde B nurses (certificate level) Lugala School of Nursing
3 LabTech, Ruaha

Staff houses, water & sewage system, environment

Housing is a huge problem in Lugala in terms of both, the availability of houses, flats and rooms and the quality of housing. Good housing is meanwhile an overall acknowledged 'Conditio sine qua non' for a favourable and supportive environment for staff, particularly as incentive in remoted areas as e.g. Lugala.
Three houses are beyond the borderline acceptable for human accommodation. They are hardly infested by bats, rats, mosquitoes and other ektoparasites.
Virtually all houses need minor repairs. Space for living is quite limited.
We have started with re-placing the over all torn and defect mosquitoe wire for all houses and laid a water pipe to a house until now without direct access to safe water.
The consciousness that water is a valuable resource has to be sharpened. I know from own investigations that for a Tanzanian District Hospital up to 80 % of the water gets lost from the system before it reaches the water taps. In 2009 we had quite often to run a generator during day time, because the storage tanks were empty and partially because of the extention of the new CTC-clinic.

The sewage system is a chronic and un-pleasant issue. The septic tanks are emptied with buckets and the faeces carried some meters away into the bush. During the rains septic tanks get over-flooded. The penetrant odour is stressing the olfactoric senses, luckily enough those senses have degenerated during the evolution of Homo sapiens subspecies sapiens.

We have created an environmental action group and just painted ten 200 L former oil barrels with Public Health motifs. They have been dispersed and allocated at different places of the compound and introduced as waste

disposal devices. The measure was accompanied by a garbage collection activity of all workers and people living at Lugala premisses.
The break through is planned for 2010. As mentioned before, in March an expert via German Senior Expert Service (SES) is expected in Lugala to assessing hospital buildings, staff houses, water and sanitary systems and to deriving proposals for improvement for Lugala, Tanganyika-Masagati and Ngalimila.

We could allocate 13 Mio TSh via TUNAJALI for 2010 for construction of a sanitary area incl incinerator, medical waste disposal and placenta disposal devices for LLH. The same at a smaller dimension will be implemented in T-Masagati and Ngalimila and financed by SolidarMed.

Solar system & i-net

The solar system was, with some few exceptions, working well during the sunny season. Now during the rainy season with often only diffuse light it quite often breaks down. Some solar panels are budgeted via TUNAJALI in 2010 and will increase the capacity.
The i-net was working most of the time reliably, interrupted by times of partial or total breakdown. Generally said, there is no much reason given for complaints about the i-net. It works better than in all other places of Africa I have worked before.

Problem:
The hardware in Lugala is worn out, screens are even hold together by tapes. We are in need of replacing them and moreover, acquiring about 4 new desktops for our common LLH/Lugala Nursing School library. The staffing with a sufficient number of PCs is also a requirement by NACTE.

Workshop

At our workshop one can study the 2nd main sentence of thermodynamics which is about entropy: 'order as the degree of the unlikelihood of a system compared with the more likely status of its components namely their distribution at random' (Ordnung als der Grad der Unwahrscheinlichkeit eines Systems, verglichen mit dem wahrscheinlicheren Zustand seiner Komponenten, nämlich ihrer zufälligen Verteilung).
In short: rehabilitation in all respects is planned for 2010 and the results will be presented in the Annual Report 2010.

Particular problems:

- **Our two old TOYOTA Landcruisers, the so called Ambulance car and the so called PHC car, are rather worn out than functional.**
  Some three months ago the Ambulance car was on its way from nearby Malinyi to Lugala when a storm rose and a palm tree fell onto the car. Nobody was injured but the car's roof at the side of the impact went approximatively towards the base of the chassis (the car body's base) leaving behind two distorted frames of windows with the glass screens blown out.

African people are likely the world's best in improvisation. This knowledge, brought to perfection, seems to me as a phylogenetic heritage and an individual master ship, an art unique on globe . No doubt, that the ability to this admirable art will disappear with growing socio-economic development. In short: our 'Fundis (= Handwerker: the hospital's driver, electrician and carpenter)' re-surrected the car's body with help of imposing devices like big lifting jacks and re- fashioned it. What was not thought being useful anymore, is now – of course still without two windows - not only 'on the road again' but our only current hospital car because the so called PHC car has chronic problems with the engine.

Basically: we are in need of a technically sound hospital car, but up to now I haven't heard about any organization which is going to donate one. Could it not be an appropriate approach to problem solving, if LMW - sorry, if I go too far - would hand over the car used by my pre-decessor and at moment used by me and assigned to the prospective accountant expected in March 2010 to LLH and supply the accountant with a new car instead ?! Even the car I'm talking about, a TOYOTA Landcruiser - I hardly used it - has 'it's years on the back' and needs an all round service which SolidarMed will pay for before the arrival of the accountant.

- **Two of the 20 feet container used as store are rusted through with bearing parts broken away by rust destruction. The affected containers are therefore open.**

Strengths:

- **2 Perkins generators, 42 KVA and 38 KVA, are in good technical conditions, 1 elder Lister Petter of 18 KVA is currently not in use but revivable.**

Support and supervision of dispensaries Tanganyika-Masagati & Ngalimila

In June 2009 the HMT LLH assessed the situation in T-Masagati and Ngalimila. I refer to the 'Rapid assessment report' attached to the Annual Report LLH 2009.

Summarizing
T-Masagati: The training level of staff is poor and the infrastructure has some significant problems.
T-Masagati is ELCT UKD-owned. Infrastructural inputs, e.g. sanitary and drainage system, are planned.

Ngalimila is community owned and LLH was rendering services until its complete break down end of 2008. From 78 dispensaries, assessed in Ulanga and Kilombero Districts by a Gvt led mission, Ngalimila was the worst.

Meanwhile, we have given some hardware inputs (cement, paintings, mosquitoe wire, nails). The willingness of the villagers to contribute actively should improve.
It is advisable to continue submitting services to Ngalimila because a significant number of LLH patients are coming from there. It is located in Kilombero but Ifakara is far and geographical conditions define Lugala as referral institution. We have staffed Ngalimila with a Nurse Assistant whose family is settled in Ngalimila and who had already before its breakdown worked there and we submit drugs and pay supervision visits.
Unfortunately intended cooperation with DMO's office Kilombero didn't work out as thought. As it was agreed on that the DMO's office in Ifakara should send a CO to Ngalimila. We paid as agreed on for the transport of the CO and his belongings. The DMO's office sent the CO but without arranging any housing. The elder man is by now accomodated in an uncompleted rural house, open to all sides and accessible to all kind of flying and crawling animals. The DMO's office was not in the position to help.
In terms of EPI, RCH and supervision by CHMT, cooperation between LLH and DMO's office in Ifakara concerning Ngalimila exists.
My advice: we should run Ngalimila on a low level until villagers are ready to contribute more substantially than they were willing and did up to now.

Supervision of both dispensaries is now done by different experienced HMT members. The only HMT-member not mobile up to now, the matron, will be supported by LLH in acquiring a driving licence and conduct supervisory visits in T-Masagati and Ngalimila (sharing the motorcycle with the midwife conducting the RCH outreach).

The staff of both dispensaries is intended to be allocated one month yearly at LLH – on a rotational basis, a LLH health worker will replace them for the respective time – in order to improve their professional knowledge and practice.

The mentioned report about the 'Rapid assessment' attached to the Annual Report is conclusive.

So called pre-nursing (preparatory) course

In 2009 the former pre-nursing 1 yr-course existed for 20 years in Lugala.

The pre-nursing one –year course has been banned in a letter from Ministry of Health , Office of the Registrar, Tanzania Nurses and Midwives Council, dated 04/09/2001 (HET/30/63B/VOL.VI/379) and a reminding letter by the same ministry from 16/03/2004 ((HET/30/63B/VOL.VIII/223), addressed to all supervisory authorities in the Tanzanian Health System.

But the course existed still in Lugala, now under the name 'preparatory course'. The reason for the government to ban it was the fact that the course was considered as recruitment of cheap labour without opening a professional perspective for the participants. Only few of the 40 participants were form IV leavers. But form IV is a standard requirement for entrance even into the lowest

grade of nursing school, the B-nurse or certificate level school. Therefore it was, in fact, not a pre-nursing or preparatory school, because only few, the form IV leavers, would have the chance to continue afterwards with nursing.

On the other hand the so called pre-nursing (preparatory) course made a substantial contribution on social welfare of young people around Lugala. In the near by village (people here call it 'town') there is a bar with at least a dozen of poorly educated girls and young women who are partially even coming from far. All of them having high expectations of their future life. Those expectations are un-realistic. The fact is that they are miserably paid for the service they have to render and we clinicians from Lugala know quite some of them as patients because they are suffering of STIs.
If we have, on the other hand, a look at the so called 'pre-nurses':
Most of them had a good time during their stay in Lugala. When they awoke in the morning they knew where to go and what to do and, the way I perceived it, they were happy with their work and the social network they had built up. They received regular teaching from senior hospital staff and they had the chance to make practical experience in all different sections of the hospital. They wore uniforms and were seen as 'nurses' by the patients and they were proud of it and their social role contributed to their self esteem. Some few, at least, who were form IV leavers, made their way further to joining nursing schools and some of our senior hospital staff had started once in the past as pre-nurse.
The so-called 'preparatory course' at LLH was not only a formal arrangement but many emotions were attached to it. Therefore it was difficult for our senior hospital staff having been highly committed to the so called pre-nursing (preparatory) course to give up, what was part of Lugala Hospital since 1989.
But there is no question about that we have to respect, accept and adopt the policy of MoH&SW. We cannot run an institution under the auspice of the hospital which is clearly considered illegal in Tanzania. We tried to find a way out via Tanzanian Red Cross (TRC) to offering a course focussing on first aid instead and possibly submitting an acknowledged certificate at the end, but that didn't materialize as the Tanzanian TRC is mainly restricted to technical aid.
Therefore we faced the pre-nursing (preparatory) course out by Dec 2009.
By good reasons the Gvt banned the one year 'preparatory' course, but the Gvt should feel obliged to develop and present another option for the same target group and think about – in cooperation with organizations of the civil society – what to offer to young people who stay after Standard VII idle in the socio-economically weak urban periphery or in remoted and poor rural areas. A kind of 'social year' – as it is established in other countries - could serve as orientation for the youth and build up personality before young people are mislead by glittering but false promises.

Lugala School of Nursing

As known to our partners in development it was the strong wish of ELCT UKD to open a Nursing School (B- or certificate level).
After several months of hard work, virtually around the clock, we did so. After selection of a 1st-yr intake of 40 nurse students out of over 180 applicants from all over the country, from Mara to DSM, from Kilimanjaro to Mbeya, taking their

Form IV results and their performance in an entrance examination, held in different parts of the country, as criteria into account, we opened Lugala Nursing School on 5th of Oct this year.

Multiple problems were to solve and substantial problems remain.
Let me just highlight the some striking features:

- **The students are obviously happy with having got the chance of becoming nurses, a socially highly connoted profession, and they are very eager to learn.**
- **Up to now we cannot fulfil all our stated objectives because we are still in the process to building up the school. This process will go on at least over the coming two years.**
- **We had extremely good luck with the acquisition of the head teacher, who is seconded from MoH&SW and highly professional, competent, experienced and committed and above all, he obviously likes to stay in Lugala.**
- **The second teacher is competent and highly experienced as well but expensive for us, but not seconded and therefore expensive for us and nobody really knows for how long she will remain.**
- **We had high expectations in LMW sending us a nurse tutor. After the visit of a delegation of LMW and EKM this hope faded – hopefully only temporarily. Our expectation to a nurse tutor sent by LMW was not at least that he/she would mobilize resources in e.g Germany to creating a continuous support for the school, ideally to finding a European partner school for on-going professional exchange and material support.**
- **Likely the main problem: Lugala Nursing School has no established partner in development up to now, who is ready to take over the responsibility for the school, to maintain the hard- and software components of the school, to allocate regular funds to the school or to feel at least obliged to submit regular support for ear-marked activities necessary to developing the school. In other words: we are in urgent need of an organisation who takes over middle- and long-term responsibility for the well being of the school as e.g. EKM did in the past and up to now – and hopefully in future – for the hospital.**

Some of the actual problems:

- **18 students asked for sponsorships because of the socio-economic situation of their families, some of the students even being orphants, they were not able to generate the school fees or at least a part of it.**

Information: the school fees only cover basic needs of the students, they make hardly a contribution to the running of the school.

Teaching allowance	500 000 TSh
Food & accomodation	400 000
Stationaries	50 000
Contribution to building construction	40 000
Examination Fees	30 000
Uniforms	30 000
Health insurance	20 000
PC use	20 000

Deposit for eventual damage (refundable)	10 000
Registration fee	10 000
Identity card	3 000
Total	1 163 000 TSh

- **If we want another intake of students after a year - it would be reasonable to have two classes running - then we need to construct a dormitory for another 40 students until latest Sep 2010. There is nobody up to now who is ready to finance it.**
  In case the situation remains at it is then there is no other way than to run the current class and have the next intake after two years.
- **The school premises are clean – except that the sanitary area has to be impoved - but the space is narrow. And that is also true for the dormitory. We need urgently to extend the store for the student's food. We asked for one not intrinsicly used 20-feet container which stands at Diocesan headquarter's premises and belongs, for all what I know, to Lugala. The container could be used as store. The General Secretary announced to consider the request generously.**

Opening an own bank account, creation of school board as requested by ELCT Health Policy and Operational Guidelines, registration process via National Council for Technical Education (NACTE) and Tanzania Nurses and Midwives Council which will lastly submit a report to the MoH&SW, all those issues are on the way.

All our partners said at a certain point in time: 'The school will come. There is no way out. The diocese wants it.' It is good that the diocese wanted the school and that it now exists: One of Lugala's main problem is that it is hardly hit by what can be summarized under the heading 'Human resources crisis in health'. In the past we have spent a significant amount of money to supporting the training of Nursing Officers outside, e.g. Grade A nurses in Ilembula. Those nurse students sign a contract with LLH and agree to working after completion of their training for a defined period of time at LLH. But particularly those nurses create a lot of problems particularly disciplinary ones. Shortly after having completed their studies and commenced work in Lugala they often have nothing else in mind than leaving the place as soon as possible. With Lugala School of Nursing we made the first step for finding an appropriate answer to the problem.
Half of the places went to students from all over the country and half of the places to students from Ulanga and Kilombero. The latter fact is hopefully an adapted and adequate response to the chronic problem of strained qualified resources which we face. But beyond any doubt, to attracting qualified workers to a remoted area like Lugala will likely remain as one of the major persistent problems. We have to struggle to achieving it and recruiting and retaining qualified HR will remain a challenge in future. We consider the foundation of a Nurse Grade B (certificate level) School at Lugala Hospital as one strategy to meeting the challenge. In that way with Lugala School of Nursing we hopefully set up a local scheme for the recruitment and retention of health workers.

We could only open the school, because we got a substantial initial financial input of more than 11 000 000 TSh from EKM (Lugala AK). We are thankful for that. Up to now all expenses are still covered by that initial amount. But the money is running out soon. And the fact is that until today there is no other partner in sight who is ready to make a definite confession to Lugala School of Nursing. Lugala Hospital with its notorious deficit can not do that. Please, understand these lines as an instant appeal for help !

2009 data for LLH & dispensaries Tanganyika-Masagati & Ngalimila

The sets of data presented in this section show minor inconsistencies. I accepted the data as they were collected by LLH, Tanganyika-Masagati & Ngalimila staff and made only few corrections concerning diagnoses.
We are working on improving data collection.
In general, the 2009 data are valid and reliable in the sense that they indicate associations, tendencies and trends.
At national Tanzanian level the MTUHA-classification of diseases is applied. For reasons of comparison at international level, the adoption of ICD-10 Version 2006 could be a preferable option.

LLH

OPD

OPD patient statistics

Children < 5 yrs	
Female	1 837
Male	1 930
Sub-total	3 767
Patients > 5 yrs	
Female	3 905
Male	2 931
Sub-total	6 836
Total	10 603

OPD diagnoses

< 5 yrs

Diagnosis	*J*	*F*	*M*	*A*	*M*	*J*	*J*	*A*	*S*	*O*	*N*	*D*	*Total*
Anaemia	15	18	12	16	11	18	15	20	21	24	22	20	212
Burns	2	1	3	1			2			2	4	1	16
Diarrhoea	7	10	8	12	10	14	11	12	7	6	9	11	117
Ear infection	4	3	5	2	1	4	2	1				1	23
Eye infection				3	1		4	2	1	5			16
Intestinal worm infestation	58	32	90	69	85	111	90	61	64	65	89	61	875
Malaria	255	168	220	314	199	282	253	202	262	222	235	213	2825
Minor surgical conditions	10	5	8	4	6	4	3	8	5	6	5	12	76
Pneumonia	10	8	6	12	21	19	18	20	22	29	30	21	216
Schistosomiasis				22	48	30	30						130
Skin infection					20	30	18	17	22	21	16	13	157
Tuberculosis	1				1							1	3
URTI	13	10	8	9	17	23	30	25	26	20	24	20	225
UTI	20	31	26	38	35	26	32	27	28	25	29	30	347
Total No of diagnoses													5238

Comments

- Diarrhoea has a seasonal pattern of distribution. It is unlikely that cases are evenly distributed over the year.
- Malaria is holo-endemic but has seasonal variations which are not convincingly reflected in the figures.
- It is unlikely that schistosomias is clustered over a period of four months. See the even distribution of schistosomiasis in following table (OPD diagnoses > 5 yrs). Schistosomiasis is an infectious disease which develops over several years until it presents with clinical symptoms. Clinically it doesn’t present seasonally.
  At Lugala OPD schistosomiasis is often an incidental finding of stool a/o urine examination. But stool and urine is examined over the whole year. Also from that point of view clustering is unlikely to reflect the true epidemiological situation.
- No skin infection for four consecutive months in a holo-endemic area for scabies is an unlikely scenario.
- It is unlikely that not a single child over the whole year presented with epileptiform disorder, nutritional disorder or ill defined symptoms and that there is not a single child in which the diagnosis could not be established.

> 5 yrs

Diagnosis	*J*	*F*	*M*	*A*	*M*	*J*	*J*	*A*	*S*	*O*	*N*	*D*	*Total*
Anaemia	3	1	4	13	11	6	8	10	7	5	4	6	78
Burns	1					2					1		4
Diarrhoea				2	8	6	12	2	5	4	8	4	51

Ear infection	10	12	11	9	10	5	3	5	5	7	8	2	87
Epilepsy	20	5	4	1			6		4	2	1	3	46
Intestinal worm infestation	353	205	368	355	375	538	427	417	415	425	435	259	4572
Malaria	424	253	315	481	249	423	262	175	320	318	350	274	3844
Minor surgical conditions	30	21	21	16	18	22	26	23	28	28	56	60	349
Non skin fungal infection	4	5	3	2		8	9	1		2			34
PID	98	106	91	88	164	166	148	156	172	145	138	141	1613
Pneumonia		3		6	14	16	20	16	19	15	13	8	130
Schistosomiasis	4	1	4	4	4	5	7	5	4	7	5	5	56
Skin infection				18	22	26	25	16	14	8	12	5	146
Tuberculosis	4	5	4	2	9	11	9	7	6	6	5	6	74
URTI	3	2			3	2	18	14	16	12	10	8	88
UTI	98	106	91	88	164	166	148	156	172	145	138	141	1613
Total No of diagnoses													12785

Comment

- **What is said for ‘OPD diagnoses < 5yrs’ applies, with modifications, also to ‘OPD diagnosis > 5 yrs’. Variations in seasonal patterns of disease are hardly reflected in the data presented.**
- **Not a single eye infection among all OPD attendances > 5 yrs and 12 785 diagnoses made is an unlikely scenario. The same consideration applies to Genital Discharge Syndrome or e.g. to neurosis / psychosis / poisoning.**
- **As mentioned before, urine for analysis is not generated ‘lege artis’ at LLH. The likelihood that specimen have been contaminated before being examined is very high. Operational research is needed (urine generated in the way it is done at LLH against urine generated from the same patient supra-pubically by aspiration and under aseptic conditions).**

OPD:
5238 + 12 785 = 18 023 (total No of diagnoses at OPD in 2009) for 10 603 patients.

CTC

Patients enrolled in ART from 4/2006 until 31/12/2009	838
Patients transferred out	69
‘Lost to follow up’	122
Patients who died	114
On ARVs at 31/12/2008	533

Patients in 2009 newly enrolled in ART

Patients	*J*	*F*	*M*	*A*	*M*	*J*	*J*	*A*	*S*	*O*	*N*	*D*	*Sub-total*
< 14 yrs													
Female	1		2	1		1				1		1	7
Male			1	1	1		1						4
14 yrs +													
Female	15	9	18	21	15	14	12	8	21	20	10	4	167 (47 / 167 pregnant mothers)
Male	4	4	7	11	9	13	4	8	8	17	4		89
Sub-total	20	13	28	34	25	28	17	16	29	38	14	5	Total 267

Transferred in	10
Transferred out	
'Lost to follow up'	
Female	47
Male	29
Total	76
Deaths	
Female 14 yrs+	8
Female < 14 yrs	1
Male	7
Total	16

Comment

We are working on inconsistencies between data presented in the two tables. They will be corrected and aligned.

Dentistry

	J	*F*	*M*	*A*	*M*	*J*	*J*	*A*	*S*	*O*	*N*	*D*	*Total*
Abs No of attendances	68	43	29	36	22	31	25	30	22	32	33	35	406
Female	47	35	17	20	15	19	15	17	15	13	24	19	246
Male	21	18	12	16	7	12	10	13	7	19	9	16	160
Age < 5 yrs	1	1	1						1		1		5
5 – 14 yrs	6	6	2	8	4	3	2	1	3	2	4	2	43
15 +													358
Caries	80	55	42	44	28	55	32	35	24	40	40	53	538
Other tooth-/peri-odontal pathology than caries	2								2				4
Additional surgical pathologies											2	1	3
Abs No of extractions	58	39	30	40	21	35	24	30	19	33	33	38	400

Comment:

- **Dental decay (caries) is diagnosed but in case left alone or treated by extraction only.**
- **Caries diagnosed 538 times, but Abs No of attendances 406 only. It is unlikely that the diagnosis ‘caries’ is confined to a single tooth because those patients who have caries present often with a series of decayed teeth (the Abs No of caries diagnosed should then be much higher).**

RCH

	J	*F*	*M*	*A*	*M*	*J*	*J*	*A*	*S*	*O*	*N*	*D*	*Total*
< 5 yrs, 1st attendance	30	47	32	36	35	26	28	31	26	23	35	28	377
< 5 yrs, follow up	324	421	402	396	419	424	373	406	393	413	399	425	4795
Pregnant women, 1st attendance	43	45	43	63	54	75	56	72	47	62	51	57	668
PMTCT tested	57	48	52	43	50	125	62	64	44	98	95	72	810
PMTCT 1 (+ve)	4	1	1	1	1	7	2			4	1		22 (2.7%)
RPR tested	Reagent	out	of	stock	92	90	82	94	75	62	67	49	561
RPR +ve												2	2 (0.36%)
FP, 1st attendance	23	36	19	29	16	13	25	38	34	30	36	3	302
FP Condom	8	2	5	3	3	1	17	8	11	8	7	4	77
FP Contraceptive pill	27	33	36	37	25	65	56	36	76	106	153	42	692
FP Depot Pro vera (Inj)	105	38	59	98	61	24	76	89	1				551
FP Implant/Norplant	2	2	4	5	4	4	7	20	15	11	8	2	84

Comment

- **The figure for PMTCT 1 (2.7 %) differs slightly from the table ‘HIV tests’ below (3.08%).**
- **Praevalence of RPR +ve is persistently low nowadays (0.36%).**
- **Condoms are given out to women attending the RCH clinic and asking for it.**

TB

Age (years)	O–9	10-19	20-29	30-39	40-49	50-59	60 +	Sub - total	Total
Female	3	2	8	8	3	2	2	28	
Male	1	5	7	19	5	11	5	53	81
HIV +ve		1	6	9	5	2	1	24 (29.63 %)	
HIV -ve	3	6	9	18	5	9	6	56	
Not tested	1 (4 months old)								81

Comments

- TB is prevalent in the community.
- 29.63 % of TB patients are sero-positive for HIV. The number of 81 is too small to draw conclusions in a statistical sense, despite of the (single digit) figures being higher in the reproductive age range.

IPD

Female ward

Patient statistics

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
ADMISSIONS	59	51	41	64	61	77	102	88	103	124	97	89	956
DISCHARGES	54	48	39	60	58	72	94	84	100	120	91	74	894
TRANSFER IN				3									3
TRANSFER OUT	3	3	1	3	2		3			1		1	17
ABSCONDED	1					1	1				1		4
DEATHS	1		1	1	1	4	4	4	3	3	5	2	29
TOTAL NO OF PATIENT DAYS	357	176	207	384	195	339	456	441	729	642	386	328	4640
AVERAGE LENGTH OF STAY	6.1	3.5	5.1	6.0	3.2	4.4	4.5	5.0	7.1	5.2	4.0	3.7	Ø 4.9

Diagnoses & diagnostic findings

Diagnosis	*J*	*F*	*M*	*A*	*M*	*J*	*J*	*A*	*S*	*O*	*N*	*D*	*Total*

Abortion	5	11	5	9	5	6	10	5	10	8	11	6	91
Abscess	1						2	1	1				5
Adhesion band(s)						1			1	2			4
AIDS	12	6	3	3	4	6	2	3	8	7	11	8	73
Anaemia	1		2	2	3		3		1	3	3	2	20
Angina pectoris		2		1									3
Appendicitis	1						1						2
Arthritis			1								1		2
Asthma bronchiale	2	1		2			3			2	2	1	13
Bleeding polyp	1												1
Burns					1		1					1	3
Cancer/tumor				2		1		1		3			7
Cellulitis						1	1				1		3
Depression		1							1				2
Diabetes mellitus				1						2			3
Dislocation									1		1		2
Drug intoxication											1	1	2
Dysentery		1				3	3			1	4		12
Endometritis									1			1	2
Epilepsy						1	1						2
Fracture			1	3	2	2	2	3	4			5	22
Gastritis	1			2	2	2	3	2		2		1	15
Gastroenteritis	5	4		4	3	3	3	7	9	8	6	2	53
Goitre										1			1
Haemmorrhoids										1			1
Head injury						1							1
Heart failure	1	2	3		3	2	4	5	3	3	5	4	35
Hepatitis									1			1	2
Hepatomegaly										1			1
Herpes zoster							1			1			2
Hyperemesis gravidarum	1					4	4	2	3	2	2	1	18
Hypertension	2			3		2	2			3			12
Hypoglycaemia	1					1			2	2		2	8
Hypovolaemic shock									1		1		2
Hysteria	1		1			1							3
Liver abscess											1		1
Malaria	14	6	8	11	13	12	10	9	19	26	15	14	157
Mastitis			1				1						2
Meningitis	1				1		1	2					5
Mental confusion				1						1			3
Metrorrhagia											1		1
Myoma										1	1		2
Nephrotic syndrome					1		1			1		1	4
Ovarian cyst				1							1	1	3
Peptic ulcer					1			1		1			4
Peritonitis									1		1		2
PID			2			1	3	3	1	3	5	2	21
Pneumonia	2	1		1		3	4	10	5	7	4	2	40
Poisoning						1		1					2
Psychosis				1				1	1				3
Pyelonephritis		2		1	1		2	1	1			2	10
Retained placenta					1		1			1	2		5
Schistosomiasis					1								1
Scorpion bite	1								1				2
Slipped disc										1			1
Snake bite			1						1		1	1	4
Soft tissue injury						1	1	1	1				4
Stroke		1		1						1		1	4

Tonsilitis		1				1	2						4
Trichomoniasis	1	1				1		2			2		9
Tuberculosis					1					1		1	3
URTI					2		2		2	2			8
UTI	3	4			5	3	15	9	7	4	8	2	60
Worm infestation	8	5	5	9	7	11	13	3	5	14	6	7	93
Wounds	2		1		2	2	2				2		11
Abs No of diagnoses													*897*

Comments

- **Abortion, endometritis, Hyperemesis gravidarum, mastitis, metrorrhagia, myoma, Ovarian cyst, PID, Retained placenta, Trichomoniasis are gyn / obstetrical conditions. Because of the limited space at maternity and the lack of a gyn ward at LLH, only women waiting for safe delivery are admitted at maternity. The LLH female ward admits medical, gyn & obstetric patients.**
- **Some of the diagnoses listed are surely underreported, as abscess, cellulitis, dysentery, soft tissue injury.**
- **Others are symptoms rather than diagnoses as e.g. anaemia, hepatomegaly.**
- **Abortion: elucidation of cause and type would be informative.**
  Bleeding polyp: anatomical site should be described.
  Gastritis & Peptic ulcer is for the time being at LLH only based on clinical assessment.
  Heart failure is a pathological condition secondary to a preceding problem, e.g. secondary to chronic severe anaemia or secondary to long standing undiagnosed a/o untreated hypertension.
- **UTI: see comment above (OPD diagnosis > 5 yrs).**
- **897 diagnoses in 956 patients demonstrate lack of comprehensive recording.**

Causes of death (female)

Month	No of deaths	Causes of death
J	1	AIDS/TB
F	0	
M	1	AIDS
A	1	Unknown
M	1	AIDS
J	4	AIDS 2 Heart failure 1 Head injury 1 (RTA)
J	4	AIDS 1 Heart failure 1 Heart failure < anaemia 1 Meningitis 1
A	4	Ascites 1 Anaemia 1 AIDS 1 Malaria 1
S	3	AIDS 2 Liver cirrhosis 1
O	3	Adhesion band 1

		AIDS 1 Heart failure 1
N	5	AIDS 2 Heart failure 1 Induced abortion 2
D	2	Malaria 1 Stroke 1
Total	29/956 admissions deaths of total No of 956 admissions (3.03 %)	

Comment

- Pre-dominance of infectious diseases, particularly AIDS and malaria but followed closely by non-communicable diseases, particularly heart failure.
- A person who dies of 'adhesion band' comes either too late to the hospital or doesn't receive appropriate treatment after admission.

Top ten diseases (female)

Ranking No	Disease
1	Malaria
2	Worm infestation
3	Abortion
4	HIV/AIDS
5	UTI
6	Gastroenteritis
7	Pneumonia
8	Heart failure
9	PID
10	Hyperemesis gravidarum

Comment

- Worm infestation might be a co-factor for mortality but is particularly contributing to chronic ill health (morbidity). Hookworm infestations are holo-endemic in Ulanga West and Kilombero South and can cause chronic gross anemia.

Paediatric section 2009

Patient statistics

	J	F	M	A	M	J	J	A	S	O	N	D	Total
ADMISSIONS	163	69	96	105	118	97	158	202	162	165	141	156	1632
DISCHARGES	150	62	88	97	111	79	147	191	151	153	126	142	1497
TRANSFER IN													

TRANSFER OUT			1		1		1		3	1			7
ABSCONDED	4			2	1	1	1	5	2	2	4	2	24
DEATHS	9	3	6	6	3	9	10	6	7	10	11	5	85
TOTAL NO OF PATIENT DAYS	642	356	332	447	432	546	717	1033	654	543	631	584	6917
AVERAGE LENGTH OF STAY	3.9	5.2	3.5	4.3	3.7	5.6	4.5	5.1	4.0	3.3	4.5	3.7	4.2

Diagnoses & diagnostic findings

Diagnosis	*J*	*F*	*M*	*A*	*M*	*J*	*J*	*A*	*S*	*O*	*N*	*D*	*Total*
Abscess		2	2				1		1		4	3	13
Achalasia						1							1
AIDS	1		1	2		1		1	1		1	1	9
Amoebiasis		1											1
Anaemia	10	6	16	8	4	10	12	28	29	11	14	10	158
Anal prolapse										2	1	1	4
Animal bite											1		1
Arthritis					1								1
Asthma bronchiale		2	1						1	1	1		6
Bronchiolitis							1						1
Bronchitis											1		1
Burns	1	2	1		1	1	3	4	5			1	19
Congenital cardiac failure					1								1
Contracture											1		1
Crocodile bite										1			1
Dental abscess											1		1
Depression									1				1
Dislocation			1			1			2			1	5
Drawning	1												1
Dysentery			2				3	2	2	2		3	14
Eczema	1												1
Eye trauma									1				1
Fixed drug reaction								1					1
Folliculitis	1												1
Fracture	4	1					2	1	2	3	4	3	20
Gastritis										1			1
Gastroenteritis	8	2	2	5	5	8	79	40	30	30	21	31	261
Haemangioma				1									1
Haematoma								1		1			2
Hemiplegia											1		1
Hydrocephalus	1												1
Hypoglycaemia								1		2	1		4
Impetigo		2											2
Insect bite										1			1
Malaria	127	36	30	49	53	68	72	81	89	56	77	72	810
Malnutrition	2	4		1		2	1			2	3	1	16
Meningitis		2			2		2	3	2	1	5		17
Necrotic ulcer		1											1
Nephrotic											1		1

syndrome													
Osteomyelitis		1		1		1							3
Otitis externa		1											1
Otitis media							1	1					2
Paraphimosis	1												1
Peptic ulcer													
Phimosis				1									1
Pneumonia	25	13	43	48	42	34	51	26	32	52	42	27	408
Poisoning								1					1
Pyelonephritis	1												1
Pyomyositis							1						1
Scabies		3	4	6		4		4	1		4	5	31
Schistosomiasis												1	1
Septicaemia											1		1
Sickle cell disease		1	4		2								7
Snake bite							1						1
Steven Johnson Syndrome					1								1
Talipes										1			1
Tonsilitis											1		1
Tuberculosis					1								1
URTI				6		6	1		2	1			16
UTI	8	4	2	6	4	6	3	6	6	4	7	8	64
Worm infestation	6	6	10	15	9	9	13	22	12	8	12	15	137
Wounds	3	1	1			1	2	1	1		2	3	15
Abs No of diagnoses													2155

Comments:

- **2155 diagnoses in 1632 admissions.**
- **Achalasia and para-phimosis are unlikely diagnoses in childhood.**
- **Not a single patient with epileptiform disorder or without established diagnosis among a total of 1632 admissions is unlikely.**
- **In ranked frequency: malaria, pneumonia, gastroenteritis, anemia are the main killers of children, compounded by worm infestation as a facilitating co-factor.**

Causes of death (children)

Month	No of deaths	Causes of death
J	9	Anaemia 1 Malaria 4 Marasmic Kwashiorkor 1 Pneumonia 4
F	3	Malaria & Pneumonia & Meningitis 1 Meningitis 1 Pneumonia & Abscess 1
M	6	Malaria 2 Malaria & anaemia 1 Malaria & G/E 1 Pneumonia & Dysentery 1 Pneumonia & G/E 1
A	6	Haemangioma 1 Malaria 1 Malaria & anaemia 1 Malaria & pneumonia 1

		Pneumonia 1 Underweight & pneumonia 1
M	3	Marasmus 1 Meningitis 1 Pneumonia & Malaria 1
J	9	Anaemia & malaria 3 Malaria 3 Pneumonia 2 Burn 1
J	10	AIDS (Pneumonia & anaemia) 1 Burns 1 Anaemia & malaria 1 G/E & malaria 2 Malaria 4 Pneumonia & anaemia 1
A	6	Burns 1 G/E 1 G/E & malaria 1 Malaria 3
S	7	AIDS (pneumonia & G/E) 1 Anaemia & malaria 1 Malaria & pneumonia 2 Pneumonia 2 Sickle cell disease 1
O	10	Burns 1 Dehydration & G/E 1 Dysentery 1 Kwashiorkor 2 Malaria 1 Malaria & G/E 1 Pneumonia 3
N	11	Burns 1 Malaria & G/E 1 Malaria & pneumonia 2 Meningitis 4 Pneumonia 1 Pneumonia & G/E 1 Septicaemia 1
D	4	Anaemia & malaria 3 Malaria & pneumonia 1
Total	84 deaths/1632 admissions = 5.15 % deaths of total No of admissions	

Comments:

- **A striking dominance of infectious diseases as top killers.**
- **73 out of 84 children (86.9 %) died immediately of infectious diseases.**
- **4 children died of burns. Patient with burns die in the tropics mainly of infectious disease (septicaemia).**
- **Between infectious diseases and malnutrition exists a vicious cycle. Malnutrition leads to underweight and infection and infection to malnutrition and underweight.**
- **Considering the before mentioned points the conclusion that virtually all children who died, died of infectious disease is allowed.**
- **Haemangioma as cause of death is very likely wrong.**

Top ten diseases (children)

Ranking No	Disease
1	Malaria
2	Pneumonia
3	Gastro-enteritis
4	Anaemia
5	Worm infestation
6	UTI
7	Scabies
8	Fracture
9	Burns
10	Meningitis

Comment

- **Malaria, gastro-enteritis with mal-absorption, PEM, ancylostomiasis (hookworm infestation), burns, all contribute to anemia in childhood.**

Male ward (adults) 2009

Patient statistics

	J	F	M	A	M	J	J	A	S	O	N	D	Total
ADMISSIONS	80	67	58	49	86	93	106	138	113	132	134	88	1144
DISCHARGES	75	57	53	39	69	66	98	72	99	79	100	78	885
TRANSFER IN													
TRANSFER OUT													
ABSCONDED	1	1		2		3	1		1		1		10
DEATHS	1	3	1	2	3	3	3	1	2	0	2	3	24
TOTAL NO OF PATIENT DAYS	576	413	407	301	469	487	688	704	782	697	568	425	5817
AVERAGE LENGTH OF STAY	7.2	6.2	7.0	6.1	5.5	5.2	6.5	5.1	6.9	5.3	4.2	4.8	5.1

Diagnoses & diagnostic findings

Diagnosis	*J*	*F*	*M*	*A*	*M*	*J*	*J*	*A*	*S*	*O*	*N*	*D*	*Total*
AIDS	4	4	6	2	3	6	2	4	2	2	4	2	41
Anaemia			1	2	2	4	1	1			4	1	16
Arthritis	4							2					6
Bacillary dysentery						1	2		1	1		2	7
Chicken pox										1			1
Diabetes mellitus					1	1	1	1	1	2			7
Diagnosis could not be established	8	1		2	1	3			1				16

Epilepsy					**1**	**1**							**2**
Eye trauma				**1**	**1**	**1**							**3**
Gastritis	**1**				**1**					**1**		**1**	**4**
Gastroenteritis	**2**	**7**	**3**	**7**	**6**	**6**	**9**	**4**	**6**	**3**	**3**	**2**	**58**
Heart failure			**2**		**2**	**5**	**1**	**8**	**4**	**1**		**2**	**23**
Hepatitis						**1**							**1**
Hypertension		**1**	**2**		**2**	**2**	**3**	**2**	**4**	**1**	**6**	**2**	**25**
Hypoglycaemia		**2**		**1**					**1**				**4**
Leprosy							**1**						**1**
Liver abscess					**1**			**2**				**1**	**4**
Liver cirrhosis								**1**					**1**
Loss of consciousness								**1**					**1**
Malaria	**15**	**11**	**10**	**5**	**12**	**13**	**5**	**10**	**5**	**3**	**19**	**12**	**120**
Meningitis					**1**								**1**
Nephrotic syndrome						**1**							**1**
Peptic ulcer	**2**		**1**		**2**	**2**				**1**	**3**	**2**	**13**
Pneumonia		**3**	**2**	**2**	**3**	**2**	**7**	**5**			**2**		**26**
Poisoning (by food)								**2**					**2**
Psychosis					**1**			**1**		**1**			**3**
Pyelonephritis					**1**	**1**	**1**			**1**			**4**
Scorpion bite													
Sickle cell disease			**1**										**1**
Snake bite				**1**		**1**					**1**	**1**	**4**
Steven Johnson Syndrome											**1**		**1**
Stroke							**1**					**1**	**2**
Tetanus												**1**	**1**
Tonsilitis							**1**						**1**
TIA									**1**				**1**
Tuberculosis	**1**	**4**	**1**		**3**	**4**					**1**	**3**	**17**
UTI	**2**		**1**	**4**		**2**	**6**	**2**	**4**	**3**	**5**	**2**	**31**
Worm infestation	**6**	**8**	**2**	**5**	**8**	**8**	**12**	**4**	**6**	**4**	**13**	**2**	**78**
Abs No of diagnoses													**528**

Comment

- **528 diagnoses for 1144 patients show (as above for Abs No of diagnoses for female admissions) a lack of comprehensiveness in data collection. The assumption is justified that also for children (in-patients) the Abs No of diagnoses might be significantly higher than documented which means that children often present with e.g. malaria + anemia (+ - diarrhoea) + worm infestation. The assumption is consistent with the clinical experience.**

Causes of death (male)

Month	No of deaths	Causes of death
J	**1**	**AIDS**
F	**3**	**AIDS 2** **TB 1**
M	**1**	**Gross anaemia 1**
A	**3**	**AIDS 1** **BPH 1** **Congestive Cardiac failure 1**
M	**3**	**AIDS 1** **Cardiac failure < anaemia 1**

		Malaria 1
J	3	AIDS 1 Cardiac failure 1 Status epilepticus 1
J	3	AIDS 1 Anaemia & pneumonia 1 BPH & gastroenteritis 1
A	1	Unconsciousness
S	2	AIDS 1 Unknown 1
O		
N	2	Stroke 1 Unknown 1
D	3	AIDS/open TB 2 Stroke 1
Total	25 deaths/1144 admissions = 2.19 %	

Comments

- **As for adult females a slight dominance of infectious diseases, particularly AIDS, but non-communicable diseases confine a non-neglect able part of causes of death in adult males.**
- **Nobody dies directly of BPH, except of untreated acute retention or untreated chronic uraemia.**

Top ten diseases (male)

Ranking No	Disease
1	Malaria
2	Worm infestation
3	Gastro-enteritis
4	HIV/AIDS
5	UTI
6	Pneumonia
7	Hypertension
8	Heart failure
9	Tuberculosis
10	Anaemia

Comment

- **Malaria is the top killer in all categories of patients (male, female, children).**
- **The high ranking of worm infestations in all patient categories reflects the poor sanitation and poor general hygiene among a population on a very low socio-economic level in a lowest income region.**

Surgical section (adults & children) 2009

(surgical patients up to know are mainly kept in two rooms administered by the male ward)

Patient statistics

	J	F	M	A	M	J	J	A	S	O	N	D	Total
ADMISSIONS													
DISCHARGES													
TRANSFER IN													
TRANSFER OUT													
ABSCONDED													
DEATHS													
TOTAL NO OF PATIENT DAYS													
AVERAGE LENGTH OF STAY													

Comment: the data will be filled in later, they have still to be separated from other male ward admissions.

Procedures

Procedure	*J*	*F*	*M*	*A*	*M*	*J*	*J*	*A*	*S*	*O*	*N*	*D*	*Total*
Abscess	4	6	1		4			1	2	2	4	4	28
Amputation							1						1
Anal fissure	1							1	1				3
Anterior vaginal plasty (<cystocele)													
Appendicectomy	2	1	3		1			1	1		1		10
Bartholini cyst (marsupialisation)												1	1
Cataract Op									22				22
Carcinoma						2			1	1	3	1	8
Cellulitis							1					1	2
Colostomy closure										2	1		3
Fractures	2	2	9	4	2	6	10	4	4	9	10	7	69
Ganglion (exstirpation)										2			2
Haemorrhoidectomy	1	2		1				3	1				8
Head injury				1	1	2	2						6
Herniorraphy	4	6	10	5	10	12	14	18	19	17	13	8	136
Hydrocelectomy	4	5		4	5	3	6	13	10	8	13	6	77
Hysterectomy (abdominal)						1							1
Laparatomy (<Intestinal obstruction)		2	2	1		2	1	1		1			10
Lymphoma (biopsies)							4	2	2			3	11
Myomectomy	1					1	2	1				1	6
Nephrectomy									1				1
Orchitis			1			1							2
Osteomyelitis							3		1	1			5
Ovarian cyst resection	4	1	2		1	3		1	2	4			18
Pelvic abscess (drainage)	1		3				1	1					6
Penis amputation (total)										1			1
Peri-appendicular abscesss		2			1								3
Peritonitis		1				1			2	1			5

Prostatectomy				1		1	2		2	2			8
Retention of urine							1	2	1		1		5
RVF								1					1
Soft tissue injury								3			2	2	7
Salpingectomy(<Hydrosalpinx)	2	1				1	1		5				10
Salpingectomy(<ruptured ectopic pregnancy)	1	2	1				2	1	1	2	2	2	12
Testicular torsion							3						3
Thyreoidectomy					1	2		1		2	4	1	11
Tubar lysis	1	1				1	1	3	3	1		3	14
Uterine fibroid											2		2
Uterine prolapse											2	1	3
Vulva warts												1	1
Volvulus Op	1		2		1						1		5
VVF repair				3					2				5
Wound	7	9	1		4	1	8	13	6	10		7	66

Comments

- **Amputation should be specified in major and minor ones.**
  'Cancer' should be specified.
  'Retention of urine' is neither a diagnosis nor a surgical procedure.
- **Sometimes diagnoses are mentioned e.g. 'peritonitis' or 'soft tissue injury' ore 'wound' (which are rather un-specific descriptions), but the respective surgical procedures are not mentioned. Surgical statistics should at least state the diagnosis and the procedure performed.**
- **'Tubar lysis' should be subject to operational research, as the effectivity of the very intervention – even under high tech conditions - might be low.**

Causes of death (surgical)

Month	No of deaths	Causes of death
J		
F		
M	1	Volvulus
A		
M		
J	1	Intestinal obstruction (died immediately after admission)
J		
A		
S	1	Multitrauma (fall from coconut tree)
O	1	Ovarian Ca
N		
D		
Total	4	

Top ten surgical diseases

Ranking No	Disease
1	Hernia
2	Hydrocele
3	Fracture
4	Wound
5	Cataract
6	Ovarian cyst
7	Fallopian Tube blockage
8	Ectopic pregnancy
9	Goitre
10	Lipoma

Comment

The table underlines, except the operations for goitre, the function of LLH as first referral hospital within the PHC and district health system.

Patient statistics for female/paediatric & male ward

	Total No of admissions	*Average length of stay (days)*
Female ward	956	4.9
Pediatric ward	1632	4.2
Male ward	1144	5.1
Female & paediatric &male ward	3732	4.7

Comments

- **4.7 days are approximately the exact figure (4.6) given in the example of 'Key indicators in PHC, Vol 1, April 2007, by Health Systems Trust, Durban, ZA.**
- **Surgical patients are not included because I still have to find out whether they are included in the male ward patient statistic or not.**
- **Maternity data are not included because of their different nature (pregnant mothers waiting for safe delivery in maternity waiting home).**
- **A high percentage of long term admitted patients as TB patients distort the figure of 'Average length of stay'.**

Maternity

Patient statistics

	No of admissions	*Total No of days spent in the ward*	*3rd/4th degree tear*	*PPH*	*Maternal death*	
J	139	1220				
F	118	982		1		
M	89	649				
A	93	727	1			
M	129	1102	1	1		
J	104	1050		1		
J	146	989			1 amniotic fluid embolism < IUFD	
A	138	1362		1		
S	195	1048				
O	211	1557				
N	194	2042				
D	158	337		1	1 Gross anemia & cardiac failure 1 PPH, endo-metritis (home delivery)	
Total	1714	13065 /1714 = 7.6 days/delivery	2			

	No of parities	Twins	Breech	< 2000 g	LBW %	Macerated	C/S	C/S %
J	139	4	1	2	1.4	5	21	15.1
F	111	7	4	1	0.9		17	15.3
M	77	1	1	1	1.3	2	10	13.0
A	78	3	12	2	2.6	1	13	16.7
M	111	2	4	3	2.7		13	11.7
J	86	0	1	5	5.8	3	14	16.3
J	121	1	2	7	5.8	1	21	17.4
A	117	5	1	4	3.4	2	18	15.4
S	146	2	1	2	1.4	7	19	13.0
O	187	3	3	6	3.2	4	41	21.9
N	133	3	1	5	3.8	6	24	18.0
D	105	2	4	2	1.9	2	10	9.5
	Total 1411	33/1411 = 2.3 %	25	39/1411 = 2.8 %		33/1411 = 2.3 %	221/1411 = 15.66%	

Comment
About 15 % as Caesarean section proportion are considered as ideal figure for a district hospital. The average figure for South African district hospitals for 2005 & 2006 were 18,4 %.
Failure in diagnostics, particularly over-diagnosis of CPD, the proportion of previous C/S done in the catchment area before, HIV prevalence proportion are some of the factors defining the actual C/S proportion.

Fresh still births

Month	Abs No	Likely cause
J	2	1 Asphyxia. Mother eclampsia 1 Cord prolapse
F	2	1 Cord x 3 around neck 1 APH
M		
A	4	1 APH 1 Asphyxia 1 Asphyxia, referred with obstructed labour 1 CPD. Delayed arrival at hospital
M	1	1 APH
J		
J	3	1 Abruptio placentae 1 CPD. Delayed arrival at hospital 1 Face presentation. Not diagnosed.
A	1	1 Twins. Inter-locked
S		
O	5	1 Abruptio placentae 1 Arm prolapse + uterine rupture. Delayed arrival at hospital 1 CPD. Delayed arrival at hospital 2 Uterine rupture
N	1	1 Mother eclampsia. Delayed arrival at hospital
D	1	1 Congenital deformation 1 Cord x 2 around neck
	20	

Comments

- **Asphyxia is likely due to failure in management of delivery or failure in newborn resuscitation. In fact both reasons are still likely at LLH.**
- **Definitely mothers regularly still report late (or too late) for safe delivery.**

Neonatal deaths

	< 24 h	> 24 h
J	1 Asphyxia	1 Preterm,

	1 Congenital Malformation	low Apgar
F	1 Congenital malaria	1 Aspiration of Meconium
M		
A	1 SIDS, high Apgar	
M	1 Fetal distress, asphyxia	
J	2 asphyxia	
J	1 SIDS	1 Congenital malaria 2 Preterm, low Apgar
A		1 preterm, Low Apgar
S		
O	2 Fetal distress, asphyxia	
N	2 asphyxia	1 Preterm, congenital Malaria
D	2 asphyxia	1 came late to hospital, low Apgar
	Sub-total 14	Sub-total 8

22 neo-natal deaths/1632 deliveries (1411 SVD + 221 C/S) = 1.3 %

Comment

Very likely maternal and peri-natal death are underreported at LLH.

Op – theatre

	J	F	M	A	M	J	J	A	S	O	N	D	Total
Laparatomies except C/S & ectopic pregnanacies	15	11	13	3	14	13	13	12	19	17	14	10	154
C/S	20	16	10	12	12	18	20	15	26	31	29	14	223
C/S + BTL	2		2	1	2	1	3	5	5	8	3	4	36
BTL	2	3	7	3	6	3	3	1	28	1	2	2	61
Ectopic pregnancies	1	2	3					2	1	1	2	2	12
VVF repair				3						2			5
Thyreoidectomies					1	2		1		2	4	1	11
Prostatectomies						1	2		1	1	2		8
Herniorrhaphies	4	6	10	5	10	12	14	18	19	17	13	8	136
Hydrocelectomies	4	5		4	5	3	6	13	10	8	13	6	77
Internal & external fixations	1	1	1	2		1	1	1	1	1		2	12
Skin grafts			2	1								3	
Cataract Ops									22				22
Minor surgical procedures													853

Comment

Due to Op-theatre statistic 259 C/S / 1411 deliveries = 18.36 % (instead of 221 C/S / 1411 deliveries = 15.66 %), which would be exactly the average figure for South African district hospitals for 2005 /2006 (see comment above 'Maternity').

OPD & IPD - services

HIV tests

Service (Service point)	Total No of clients tested	Female tested	Male tested	Total No of clients tested +ve	Female tested +ve	Male tested +ve	% Total No of clients
PITC (CTC & Lab)	1516	1139	377	253	154	99	16.69
PMTCT (RCH)	810			25			3.08
PMTCT (Maternity)	187			17			9.09
VCT (CTC)	589	362	227	59	33	26	10.01
Total	3102			354			11.41

Comments

- **11.41 % of all clients tested in 2009 were sero-positive for HIV**
- **Higher number of female tested compared to men might be because female are attending health facilities quite more frequent than men because they take care for their children's health.**
- **PICT sero-positivity figure might be higher than PMTCT and VCT because testing was induced by clinicians suspecting possibly sero-positivity based on medical history taking and clinical examination.**
- **PMTCT (Maternity) sero-positivity figure might be higher than PMTCT(RCH) because only those women were tested at maternity who have not been tested before routinely at RCH clinic. Women attending RCH might be more conscious concerning their (and their babies') health.**

X-ray section

	Chest	*Upper extremities*	*Lower extremities*	*Controls*	*HSG/IVU*	*Sub-total*
J	21	4	4	1		30
F	35	8	13	3		59
M	24	11	10	1		46
A	40	4	5	3		52
M	39	3	6	1		49
J	49	14	9	2		74
J	51	27	14	2		94
A	62	19	13	2	11	107
S	48	23	16	1	2	90
O	72	22	10	4	3	111
N	37	16	11		1	65
D	39	27	13	5	4	88
Total	517	178	124	25	21	Total 865

Laboratory

	J	F	M	A	M	J	J	A	S	O	N	D	Total
B/S for MPS	1542	1271	1413	1798	1939	833	1730	1984	2155	2033	2080	1670	20468
B/S for MPS +ve	714	613	811	1040	914	521	1200	1316	1421	1304	1411	1004	12269
Hb	727	811	617	914	1003	516	821	1117	1201	1401	913	713	10754
Hb < 70g/L(50%)	57	48	104	201	87	37	97	311	124	56	98	88	1308
RPR	Reagent	out	of	stock	63	160	191	268	192	257	117	147	1395
									6	4	2	5	17
Blood sugar	47	24	30	40	57	60	27	34	34	24	14	24	415
Blood sugar > 10 mmol/L (180 mg/L)	3	7	1	2	10	4			1	3	7	1	39
Stool	723	564	571	755	791	594	856	1079	931	1081	1048	748	9678
Hookworms +ve	239	148	207	194	199	267	307	302	267	214	277	112	2733
Ascaris +ve	30	19	27	14	34	40	47	38	39	37	37	13	375
	2	3	6	7	5	4	8	6	13	16	19	36	128
Urine analysis	714	870	740	814	997	714	1057	1126	974	997	779	907	10689
Schistosoma haematobium +ve		3	1	2		2	3		1	4			16
T vaginalis +ve	4	2	7		3	4	5		6		6	7	44
Sputum for AFB	34	13	25	28	20	25	22	33	27	20	10	19	270
AFB +ve	1	4	1	1		3	3	3	4	2	1	1	24

Comments

- **12 269 / 20 468 B/S (59.94 %) were positive for MPS.**
- **1 308 / 10 754 (12.16 %) had a Hb lower than 50 %**
- **24 / 270 (8.89 %) samples were +ve for AFB.**
- **The quality of LLH urine analysis as said at other places should be assessed by an operational research.**

HIV prevalence among blood donors

Total No of potential donors tested	432	100.00%
Female	105	24.31%
Male	327	75.69%
HIV +ve	12	2.78%
Female	7	1.62%
Male	5	1.16%

Comment

- **2.78 % of potential blood donors at LLH have been tested sero-positive for HIV. It should be remembered that only persons - due to the medical history they give – are considered healthy and appear clinically healthy are asked to donate blood.**
- **The striking overweight of male donors might be explained by the fact that females in the reproductive age are often pregnant or had abortions or have undergone recent deliveries and are therefore – in addition to all other compounding causes of anaemia as malaria, ancylostomiasis etc – anaemic and therefore not fit for blood donation.**

Differentials

	J	*F*	*M*	*A*	*M*	*J*	*J*	*A*	*S*	*O*	*N*	*D*	

20 – 24 yrs Male tested Male tested + ve		3	1	2	4		9 1	3	4	1	7	4	38 1
20 – 24 yrs Female tested Female tested + ve		1	2	1	 1	4	3	4	3	1	4	6	29 1
25 yrs + Male tested Male tested + ve	24 1	27 1	24 1	19	21	20 1	40	17	24	26	19	28	289 4
25 yrs + Female tested Female tested + ve	3	4 1	5 1	2	3 1	6 3	4	6	11	7	12	13	76 6

Blood transfusions

	J	***F***	***M***	***A***	***M***	***J***	***J***	***A***	***S***	***O***	***N***	***D***	***Total***
Abs No of recipients	**47**	**54**	**35**	**26**	**33**	**64**	**63**	**37**	**34**	**48**	**34**	**41**	***516***
Abs No of units given	**54**	**59**	**47**	**34**	**46**	**64**	**65**	**44**	**37**	**51**	**37**	**42**	***580***

Comments

- **The discrepancy of 'Abs No of recipients' and 'units given' is explained by the fact that some patients received > 1 unit of blood. In fact, the situation is that we often have to manage a patient with a single unit who would rather need two.**

Infusion Unit

Production of infusions in 2009

	J	F	M	A	M	J	J	A	S	O	N	D	Total
Dextrose 5%	160	320	231		20	40	340	260	263	260	200	180	2274
NaCl 0.9 %	220	320	121					42	202	220	324	441	1990
Ringer's Lactate	200	240	80	62	122	161	302	202	244	300	140	240	2293
Water for injection			6		4		13	22	7	6	8	5	71
Transfusion bottles with anticoagulant	20	20	36	20	42	10	67	21	34	21	20		311
Others					20			45	15			25	105
Total	600	1000	474	82	208	211	722	592	765	807	692	891	7044

Comment

- **The yearly evaluation of the infusion unit by St Luke's Foundation underlined the high quality of our production of infusions. The infusion unit is an un-dispensable resource of LLH.**

Tanganyika – Masagati dispensary

OPD patients < 5 yrs
Diagnoses & diagnostic findings

Diagnosis	*J*	*F*	*M*	*A*	*M*	*J*	*J*	*A*	*S*	*O*	*N*	*D*	*Total*
Anaemia	2		3	2	3	4	3	2	3	3	4	2	31
ARI	60	51	51	60	56	65	57	45	41	43	39	40	602
Asthma bronchiale						1				1	2		4
Burns	2	3	5	4	3	5	2	3	2	4	3	4	40
Ear infection	7	3	2	3	2	3	2	3	1	3	1	4	34
Emergency oral care	1	2	3	4	5	6	4	2	3	7	6	4	47
Epilepsy			1	1	1	1	1		1	1	2	3	12
Eye infection	3	4	3	4	6	5	3	4	2	4	2	6	44
Fungal infection (non-skin)	4	3	2	4	5	6	2	3	2	3	6	5	45
Gastro-intestinal disease (non-infectious)	12	9	13	11	14	10	11	12	10	13	12	16	143
Ill defined symptoms										3	1	2	6
Malaria	83	76	65	78	68	57	48	37	39	57	43	48	699
Minor surgical conditions	13	12	14	21	23	18	12	13	12	21	26	20	205
Nutritional disorders			2		1			2	1	1	1	1	9
Pneumonia	21	19	18	21	19	23	11	13	10	21	18	19	213
PEM	1				2	3	2	3	2	2	3	4	22
Skin infection	5	4	6	5	6	4	3	6	5	10	12	10	76
UTI	11	10	13	12	13	12		6	4	6	8	13	108
Worm infestation	18	21	32	26	20	21	17	18	13	19	17	15	237
Total No of diagnoses													*2577*

Comments

It is unlikely that there were no patients over the year presenting with e.g. abscess, diarrhoea, dysentery, fracture.

OPD patients > 5 yrs
Diagnoses & diagnostic findings

Diagnosis	*J*	*F*	*M*	*A*	*M*	*J*	*J*	*A*	*S*	*O*	*N*	*D*	*Total*
Anaemia					1	4	1			1	1		
ARI	21	18	21	26	45	52	49	48	46	41	38	35	450
Asthma bronchiale								2	2	3	1	2	10
Burns	3	1	2	3	4	2	1	2	3	2	3	2	28
Cardiovascular disease	2	3	4	3	4	10	6	5	3	6	8	6	60
Ear infection	4	1	2	3	4	2	3	2	1	3	4	3	31
Emergency oral care	3	4	5	6	6	8	6	4	3	6	4	6	62
Epilepsy	3	2	3	3	4	4	2	3	3	4	3	4	38
Eye infection	3	2	3	5	6	4	2	3	3	4	2	4	42
Fungal infection (non-skin)	5	4	3	2	6	4	3	5	4	6	2	4	48
Gastro.intestinal	4	9	14	12	13	15	10	8	13	10	11	15	140

disease (non-infectious)													
Genital Discharge Syndrome	**3**	**1**	**4**	**2**	**3**	**4**	**3**	**2**	**2**	**4**	**2**	**2**	**32**
Genital Ulcer Disease	**1**		**1**	**1**	**2**	**2**	**2**		**1**	**2**	**4**	**3**	**19**
Ill defined symptoms/no diagnosis					**2**		**2**			**3**			**7**
Malaria	**58**	**49**	**53**	**67**	**70**	**65**	**41**	**35**	**34**	**45**	**43**	**45**	**605**
Minor surgical conditions	**18**	**26**	**27**	**29**	**32**	**38**	**26**	**31**	**43**	**57**	**61**	**57**	**433**
Other diagnoses					**2**		**2**			**3**			**7**
PID	**3**	**2**	**3**	**4**	**6**	**2**	**3**	**3**	**4**	**6**	**4**	**3**	**43**
Pneumonia	**9**	**10**	**8**	**11**	**18**	**20**	**13**	**11**	**8**	**10**	**12**	**18**	**148**
Pregnancy complication	**1**												
PEM										**1**			**1**
Psychosis												**1**	**1**
Schistosomiasis	**1**			**1**		**1**		**1**			**2**	**1**	**7**
Skin infection	**6**	**3**	**4**	**5**	**6**	**8**	**7**	**6**	**7**	**8**	**14**	**16**	**90**
UTI	**6**	**3**	**4**	**5**	**8**	**6**	**4**	**3**	**4**	**8**	**6**	**4**	**61**
Worm infestation	**16**	**18**	**20**	**24**	**23**	**30**	**26**	**30**	**28**	**31**	**33**	**30**	**309**
Total													***2681***

Comments

- **Unlikely: no abortion, abscess, AIDS, arthritis, cellulitis, diarrhoea, dysentery, fracture, gastritis/PUD, malignant tumor, mastitis, peritonitis, soft tissue injury, STI, TB in 2681 patients over the whole year 2009. The same consideration applies to anaemia: only 8 cases.**

Deliveries (SVDs)

	J	*F*	*M*	*A*	*M*	*J*	*J*	*A*	*S*	*O*	*N*	*D*	*Total*
SVDs	1	1	2	1				2	2		1	2	12
Female	1							1	2		1		5
Male		1	2	1				1				2	7

NGALIMILA dispensary

Patient statistics 01.08. – 31.12.2009 (the dispensary was re-opened on 01.08.2009)

Patients < 5 yrs	
Female	284
Male	261
Sub-total	545
Patients > 5 yrs	
Female	73
Male	70
Sub-total	143
Total	*688*

OPD patients < 5 yrs

Diagnoses & diagnostic findings

Diagnosis	*A*	*S*	*O*	*N*	*D*	*Total*
Diarrhoea						10
Dysentery						1
Ear infection						2
Malaria						215
Minor surgical conditions						9
Pneumonia						16
Scabies						9
Skin infection						16
Snake bite						1
UTI						3
Worm infestation						6
Total						*288*

OPD patients > 5 yrs

Diagnoses & diagnostic findings

Diagnosis	*A*	*S*	*O*	*N*	*D*	*Total*
Bancroftian Filariasis						1
Cellulitis						1
Dental caries						1
Diarrhoea						17
Dog bite						3
Dysentery						1
Ear infection						5
Eye infection						2

Head injury						1
Malaria						254
Minor surgical conditions						13
PID						1
Pneumonia						16
Pyomyositis						1
Scabies						7
Skin infection						17
Snake bite						2
Tonsillitis						7
Urethral discharge syndrome						1
UTI						8
Vaginal discharge syndrome						5
Worm infestation						7
Total						*371*

RCH (SVDs)

Female	8
Male	5
Total	13

No breech, no twins reported.
No complications seen as APH, PPH, eclampsia.

EPI

BCG	38
Pentavalent	137
Polio	137
Measles	41
TT	12
Total	265

Comment

- **265 injections & 813 monovalent vaccines given [265 + (137 x 4) = 813]**
- **Pentavalent = DPT + Hep B + Hib**

INCOME			***EXPENDITURE***	
HOSPITAL INCOME	**AMOUNT**	**AMOUNT**		
	Jan-Dec. 09	**Jan-Dec. 2010**	**1. ADMINISTRATIVE**	**Jan-Dec**
Inpatients	73'000'000.00	93'500'000.00	Stationeries	6'8
Outpatients	37'000'000.00	79'800'000.00	Stamp & Postage	2
Internt	269'000.00	200'000.00	Internet Bill	1'4
Car hire	800'000.00	1'000'000.00	Phone & voucher	8
Canteen Rent	240'000.00	240'000.00	Bank charges/service	1
Workshop Income	215'000.00	100'000.00	Audit & Accountant fee	2'5
Staff Sick Contribution	720'000.00	800'000.00	Office Equipments	4'0
Water & Electricity	2'000'000.00	2'100'000.00	***Sub total***	**16'0**
Guest Hosuse Income	269'000.00	500'000.00		
House Rent	2'000'000.00	1'800'000.00	**2. HOSPITAL MAIN WORK**	
Hostel Fees	-	-	Medicine/ Drugs Procurement	72'0
Bicycle Packing area		36'000.00	Hospital supplies	8
Other Income	5'600'000.00	500'000.00	***Sub total***	**72'8**
Sub total	**122'113'000.00**	**180'076'000.00**		
			3. OPERATING	
INCOME FROM DISPENSARIES			Salaries - Lugala staff	
Ngalimila Dispensary	3'000'000.00	4'000'000.00	- Hospital Payable	120'9
Tanganyika Masagati	3'200'000.00	4'200'000.00	- Graned by MoH	108'0
Sub total	**6'200'000.00**	**8'200'000.00**	Salaries - Dispensaries staff	
			- Ngalimila Dispensary	2'6
Govornment Grants			- T. Masagati Dispensary	4'5
Ministry of Health and Social Welfare (MoHWF)	108'000'000.00	130'000'000.00	Call allowance/other allow.	11'0
Nationa Health Insurance Fund (NHIF)	4'500'000.00	4'000'000.00	Salary Temporary staff	2'5
Bask Fund	32'000'000.00	35'000'000.00	NSSF 10%	11'8
Sub total	**144'500'000.00**	**169'000'000.00**	Staff Leave	1'0
			Staff allowance/ Responsibility	2'2
GRANDS FROM DONORS			Staff Uniform	4
Belgian Technical Cooperation	11'000'000.00	-	Staff Training	26'7
SolidarMed Support Unity	35'000'000.00	35'000'000.00	***Sub total***	**291'6**
Tunajali Care and Treatment Program - Project activities	125'363'500.00	120'000'000.00		
Tunajali Care and Treatment Program - Administration	21'360'000.00	20'000'000.00		
ELCT Grand for Training	3'000'000.00		4. Electricity, Energe & Diesel	
Grand from Lugala Arbeitskreis	48'000'000.00	48'000'000.00	- Diesel	16'8
Donation from other Donors (to be found)	52'355'000.00	-	- Fire wood	3
Sub total	**296'078'500.00**	**223'000'000.00**	- Maintenance of water & elec	1'0
			Sub total	**18'1**
G R A N D T O T A L	**568'891'500.00**	**580'276'000.00**	**5. TRAVEL & TRANSPORT**	
			Transport expenses	3'0
			Travel others	1'5
51'224'000.00			Food & Accommodation	1'2
			Travel Dr. I/C	9
			Travel Treasurer	6
			Sub total	**7'2**
			6. PROPERT MAINTENANCE	
			Maintenance of Building	14'0
			Maintenance of Equipment	4'0
			Compus Maintenance	1'2
			Propert Insurance	5
			New staff House	
			Car maintenance	5'0
			Maintenance of furniture & fitting	1'0
			Sub total	**25'7**

Comment

- **The budget calculation is a pre-liminary outline, still subjected to discussions and corrections.**
- **Roughly spoken, the annual deficit of LLH – without external substantial donations – would have been about 200 000 000,00 TSh in 2009.**
- **The definite budget for 2009 can not be presented before the audit which takes place in February 2010.**
- **But, without anticipating the auditors' report, the highly dependency of LLH is a striking fact. Without the on-going support of our partners in development (EKM, LMW, SolidarMed, TUNAJALI) and the Gvt support (bed grants, Basket Fund) LLH would be bankrupt within one month time. The same, the high dependency from outside support, is - by the way - true for Lugala Nursing School. But even worse, for the Nursing School we haven't found an organization yet being ready to take over the financial tutorship for the school.**