

CMI REPORT

Review of Haydom Lutheran Hospital

External Review Contracted by the Royal Norwegian
Embassy, Dar es Salaam

Ottar Mæstad
Eamonn Brehony

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Executive summary

The purpose of this review is to determine the effectiveness of the Royal Norwegian Embassy's support to Haydom Lutheran Hospital (HLH), including the effects through hospital service provision as well as through related development projects in the area. The review will also draw up perspectives on how HLH can continue its operations into the future and become further integrated into the Tanzanian health system.

The vision of HLH is *to cater for the needs of the whole human being, i.e. physically, mentally, spiritually and socially*. The objectives include reducing the burden of disease, poverty alleviation and capacity building. HLH is more than a hospital – it is a broad-spectrum development agent in a remote area of North-West Tanzania.

HLH as a hospital

Efficiency

HLH offers a wide range of services, both curative and preventive. The composition of the service package is driven both by a concern for reducing the burden of disease and from a concern about equity in the provision of health. Also, an extensive package of curative services is seen as an important factor in building trust in preventive services. The strong focus on equity (and trust-building) at HLH implies that standard cost-effectiveness criteria cannot be used to assess the efficiency of the service package offered.

Recommendation:

Review the service package offered at HLH in light of the objectives of the hospital, focusing on the following questions:

- How far is HLH prepared to go in securing each individual his/her right to health if this comes at the expense of a larger reduction in the aggregate burden of disease?
- What package of curative services is needed in order to build the required level of trust in the community?

Assessing the development in outputs over time was hampered by weaknesses in the health information system.

Recommendation:

- Put high emphasis on the design and implementation of a new and more reliable health information system
- Design data entry procedures that maximise the probability of high quality data being entered into the system

The available output data suggest that aggregate output remained fairly stable from 2004 to 2006, both at the hospital and at the three health centres. We observe a decline in the numbers of outpatients and operations. At the same time, the number of contacts through the Reproductive and Child Health clinics has increased significantly and the number of inpatients has remained stable. Inpatient wards are operating close to their capacity limits.

Physical inputs (e.g., number of staff and number of beds) have also remained fairly stable, but costs have increased by 139%. Efficiency, measured as aggregate outputs per employee, has remained constant through the period.

Sustainability

Higher staff costs explain 56% of the cost increase. 34% is explained by increased costs of medical and clinical supplies and from increased operational expenses. Higher staff costs are primarily due to a sharp increase in the government pay scale for health workers.

Operating expenses have increased by 80% in the period. One should, however, not attribute the whole of this increase to the running of the hospital. This cost component includes the costs of auxiliary services, which also generate income for the hospital. There was only a small increase in operating costs net of income from HLH facilities and equipment in the period 2004-2006.

Recommendations:

- Improve the quality of accounting practices
- Closely track the trends in the cost of medical supplies and in operating costs net of income from HLH facilities and equipment
- Service units that primarily provide external services and are meant to be income-generating activities for the hospital should be organised in separate profit units

The cost increase has largely been covered by higher donor grants. 78% has been covered by increased support from the Royal Norwegian Embassy (RNE). Increased patient fees have covered 5% of the increase and higher government grants have covered 4%.

The contract between RNE and HLH entails a sharp reduction in the level of support in the years to come. Without a renegotiation of the contract, HLH will have to reduce its activities drastically in the next three-year period.

There has been no change in user fee rates since 2003. The aggregate income from user fees nevertheless increased by 22% between 2004 and 2006. Most of the fees are from daily charges to inpatients. There is no consultation fee for outpatients, which is common in other areas of the country.

Recommendations:

- Regularly revise user fees in line with general inflation unless particular local circumstances dictate otherwise
- Ensure that the prices of drugs and tests are not lower than in government facilities
- For outpatients, consider implementing a consultation fee
- For inpatients, consider a general increase in fees as well as a change in the fee structure reflecting both willingness to pay and equity considerations
- Encourage research that investigates the demand response to various changes in the user fee structure

HLH possess various assets that can potentially generate income for the hospital, e.g. the Mulbadaw farm and an excavator. So far, major incomes have been generated by the excavator while the farm has been running with a loss. The farm is, however, not yet operating at full scale.

Recommendations:

- Treat projects which mainly function to generate income for the hospital as profit centres in the financial accounting system
- Adopt a hard-nosed business strategy for the purely income-generating activities, which implies that projects that run at a loss should be stopped

It was difficult to get a complete and reliable picture of the staffing level over time. The general picture seems to be that the total number of staff has remained stable. This must be regarded as an achievement in a period during which the government has made concerted efforts to attract more health workers into the public sector, at the same time as organisational change has created a turbulent time at HLH. The largest human resource challenge for HLH is the limited and unstable access to medical doctors, and in particular to specialists.

Recommendation:

- Set aside sufficient resources to attract the required number of medical doctors and specialists, through training of HLH's own staff for the long run and through various mechanisms for attracting specialists from other parts of Tanzania or from abroad in the short run.

Interviews with staff displayed a desire for increased openness and transparency in the organisation and a closer relationship between management and staff. Staff also perceived a lack of implementation force in the management team as well as expressing frustrations about removed privileges in relation to further educational opportunities. Most staff members supported the recent reform processes, but there is also some degree of uncertainty about what the future will bring.

Recommendations:

- Put greater emphasis on the implementation of agreed reforms, in particular the new organisational structure and the efforts to increase transparency, such as the formalisation of guidelines and policies and the strengthening of information systems
- Ensure that voices from the staff are efficiently communicated to the management (e.g. through formal meetings and informal discussions in each department). One concrete suggestion from staff was to take minutes of staff meetings, in particular when staff meet in smaller groups
- Improve the systems of communication about decisions taken, and the reasons behind the decisions, in particular those decisions that affect staff benefits or other issues that are important for the working environment
- Be careful about removing privileges from a large proportion of the staff during the process of organisational change

HLH's place in the Tanzanian health system

HLH has been part of the Tanzanian central health plan since 1967. HLH appears to have excellent relations at both national and local government levels. However, this positive attitude is not always backed by financial resources.

In 2005/06, HLH unsuccessfully applied to be upgraded from a first level to a second level referral hospital. The application was declined because HLH does not have a sufficient number of key staff; in particular, there is a lack of specialists. The only realistic possibility for reaching the required number of specialists seems to be to train its own staff. This will take considerable time. The financial consequences of upgrading to a second level referral hospital are unclear.

HLH does not at present obtain a reasonable share of the district health basket funds from all the districts and regions served by the hospital. This is partly due to a lack of coordination among local government units.

HLH has increasingly taken on an advocacy role vis-à-vis local and central government. Two obstacles to playing an influential role through advocacy are 1) the location of the hospital far from Dar es Salaam, and 2) inadequate support from the Christian Social Service Commission.

Recommendations:

- Critically evaluate both the financial benefits and costs of becoming a second level referral hospital
- Continue the efforts to obtain a fair share of district health basket funds
- Consider which parts of the advocacy function HLH should pursue on its own and in which areas it would be more efficient to partner with other institutions

HLH as a development agent

In addition to serving as a hospital, HLH has played an important role in the general development of the Mbulu district as well as the surrounding districts of Hanang and Iramba. These are among the poorest districts in Tanzania. Part of the development effect comes from HLH itself being a large employer and from the incomes that this brings to the area. But in addition, HLH has facilitated a large number of development projects in the area, which have improved the livelihoods of many people. The close relationship between HLH and the local communities has enabled the hospital to respond in a timely and efficient manner to local needs and emergencies. HLH also operates as a voice from civil society vis-à-vis government bodies. In practice, HLH is currently functioning as a strong, local developmental NGO in a remote area of Tanzania.

The development projects fall mainly within the following categories: food security and clean water, transport infrastructure, capacity building/education and a cultural programme.

The largest projects have been the food relief projects in times of acute food shortage, conducted on a food for work basis. For example, in 2004 almost 2,400 metric tons of food were distributed to 41,629 households in 180 villages. The food support programmes run by HLH appear to be quite well targeted compared to other similar programmes. HLH has managed to differentiate the degree of support both between villages and within villages, depending on the actual need. HLH also seems to have been intelligent in withdrawing the support when it is no longer needed.

Other important development projects include the Four Corners Cultural Programme, Dr Olsen Secondary School and the associated Girls' Hostel, water projects (boreholes, pipelines and dams), 139 km of road construction, seven primary schools and a police station.

Most of the development projects have directly addressed basic human needs (access to food, water, and health services) and are clearly relevant to the development of the area. The impacts of the projects include 1) reduced vulnerability (through development of transport infrastructure, famine relief, water projects and the building of a police station), 2) enhanced opportunities (through construction of schools, roads and stimulation of local markets through the presence of the hospital), and 3) empowerment (through raising awareness and channelling information about local needs to the government, the establishment of village committees which choose among alternative development projects, and the cultural centre).

All district government officials had great praise for the work of HLH both in curative health care and in general development in the community.

It is our impression that the apparent success of HLH as a development agent in the area has come about despite the lack of an explicit development strategy. Development activities have, however, emerged from a fine understanding of people's needs and from a genuine interest in addressing those needs. Projects have been implemented by drawing on competence and resources that have been developed within the hospital itself. The effectiveness of HLH as a development agent has been increased by 1) HLH's long-term presence in the area, 2) a high level of trust in the community, and 3) a large workshop of a high standard.

A future for HLH

In order to sustain the present level of activity at HLH, the main challenges appear to be to 1) strengthen the financial base, 2) attract and retain qualified staff, 3) implement a new organisational structure and new information systems, and 4) manage the change processes so as to maintain staff motivation.

Strengthen the financial base

HLH will never become economically self-sustaining in its present form. No institution which aims at making high quality health services accessible to poor people can avoid relying on external support, either from the government or from other donors. At the moment, there appear to be three main sources that possibly can contribute to closing the financial gap at HLH: 1) the Government of Tanzania, 2) the RNE, and 3) foreign private donors (individuals or institutions).

The prospects of obtaining significantly higher government funding do not appear very promising at this point in time, unless HLH is able to mobilise the required political will through effective advocacy. Upgrading the hospital to a second level referral hospital or a teaching hospital is not likely to be an economic panacea, but becoming a teaching hospital might address part of the financial gap by availing more human resources (tutors and interns) to the hospital.

HLH enjoys strong support from private donors in Norway. One possibility that might be explored would be to establish a fund whose returns can be used to finance recurrent expenditure at HLH.

Recommendations:

- Explore the possibilities of becoming a teaching hospital, either as a faculty under KCMC or as an independent institution
- Make continued and systematic attempts to increase the share of staff on a government staff grant

There are strong arguments for continuing the RNE support of HLH. We recommend a future funding arrangement along the following lines:

- Continue the support of HLH approximately at 2007 levels
- Ask HLH to develop an action plan towards securing a more solid future funding base
- Make continuing support to HLH dependent on the implementation of appropriate accountability measures
- Make continued support to HLH dependent on further reforms of its governance structure

- Prepare a timetable for implementing necessary reforms, preferably with involvement of HLH staff. Allow sufficient time to implement the reforms in order not to overload the administration or destroy staff motivation
- Contribute to maintaining the role of HLH as a development agent in the area, recognising the key role of the hospital in this regard

Given the projected heavy reliance on donor funds in years to come, a review of the governance structures at HLH should be undertaken. The aim would be to secure donor interests through increased professionalism in the governing structures, while at the same time securing the interests of the church as the present owner of HLH. One possible way ahead would be to consider the model created by the Kilimanjaro Christian Medical Center through its formation of the Good Samaritan Foundation. This large hospital is still owned by the ELCT but is governed by a separate trust.

Attract and retain qualified staff

So far, HLH has been able to retain most staff despite government efforts to attract workers to government facilities. This has been achieved by matching the dramatic increase in government salaries over the past two years. But HLH has not been able to match the recent increase in the pension benefits offered to government employees.

The most difficult people to attract to Haydom are medical officers and specialists. Without stable access to highly qualified staff, community trust in HLH may rapidly dwindle.

Recommendations:

- Continue pursuing present strategies for training HLH's own staff for increased self-sufficiency in personnel in the long run
- In the short run, maintain a high level of expertise by attracting highly qualified personnel from abroad or from other parts of Tanzania
- Carefully monitor the flow of nurses into and out of HLH and the stock of senior nurses. Ensure that a good proportion of the nurses have access to valued further training opportunities
- Make a plan for training a sufficient number of medical doctors and specialists to fulfil future needs, taking into account the difficulties that will be faced in the long-term retention of these staff at HLH
- Monitor the impact of government pension reforms on attrition rates
- Ensure that supportive supervision is implemented as a measure towards maintaining high professional standards and a motivated workforce

Implement a new organisational structure and new information systems

A new organisational structure with a larger management group and more decentralised decision making is about to be implemented. An important challenge is to make the new leaders take responsibility for the implementation of reform as an integral part of the management team.

With HLH's heavy reliance on external funding, accountability mechanisms have to be strengthened in order to assure the donors that HLH is spending their resources efficiently.

Manage the change processes to maintain staff motivation

High staff motivation is crucial both for retaining staff and for maintaining high quality services. A period of reform is normally also a period fraught with fear and uncertainty among staff.

Recommendation:

- The management should be explicit about its change management strategy and systematically evaluate its own performance in managing change, in cooperation with representatives of the staff.

1. Introduction

1.1 Scope

Haydom Lutheran Hospital (HLH) is a first level referral hospital located in Mbulu district, Manyara region. HLH was established by the Norwegian Lutheran Mission in 1955 and is now owned by the Evangelical Lutheran Church of Tanzania (ELCT). The hospital has been part of the national health plan in Tanzania since 1967.

HLH receives substantial support from the Norwegian government through the Royal Norwegian Embassy in Dar es Salaam (RNE). The support is administered through a Block Grant from the RNE to HLH.

The purpose of this review, conducted on behalf of the RNE, is to determine the effectiveness of this support programme, including its effects both through hospital service provision as well as through related development projects in the area. The review will also draw up perspectives on how HLH can continue its operations into the future and become further integrated into the Tanzanian health system (see Appendix 1 for the full Terms of Reference).

The team members would like to take this opportunity to express our gratitude for the warm hospitality, friendliness and good cooperation afforded by the staff at Haydom, the Embassy, the Ministry of Health, local government representatives, and representatives from ELCT and the local community.

1.2 Methodology

The team use the following methodologies: 1) document reviews, 2) field visits, 2) interviews, meetings and group discussions, and 4) its own compilation of statistics.

Documents reviewed:

- Appropriation Document and Contract for the Block Grant from the RNE
- Project Report and audited accounts from the running Programme with the RNE
- Annual reports from HLH 2004-2006
- Previous reviews (Jareg and Mujinja, 2005; Price Waterhouse Coopers, 2006)
- Correspondence between HLH and the Ministry of Health
- Haydom Lutheran Hospital Five Year Strategic Plan 2002-2006
- Food for Work Report 2004
- Four Corners Cultural Centre – plans and reports
- Auditors' Report to Management re 2006 audit
- ELCT Health Policy and Operational Guidelines – 2006
- Audited Financial Reports – 2004-2006
- Revised budget 2007
- Talk given by Dr Berege (MoH) at Haydom, January 2005
- Internal documents and reports

Field visits:

- Haydom Lutheran Hospital
- Gendabi Health Centre

- Reproductive and Child Health (RCH) clinics
- Development projects (bridges, roads, dams, water pump projects, primary schools, secondary school, nursery school, police station, cultural centre)
- Haydom Nursing School
- Mulbadaw farm
- CMSC workshop

Interviews, meetings and group discussions:

- Management and five groups of staff from different cadres at HLH
- Gendabi Health Centre staff
- Ministry of Health representatives
- Local government officials in Mbulu and Hanang districts
- CCM party officials
- Representatives of ELCT
- Local villagers
- Royal Norwegian Embassy, Dar es Salaam

Compiling of additional statistics:

- Financial statistics
- Human resources statistics
- Hospital activities statistics

The field visits, meetings and interviews were conducted in the period 18-30 September 2007 (see Appendix 2 for the itineraries of the team members and Appendix 3 for a full list of people interviewed).

Outreach and development projects were visited randomly as the reviewers travelled around Mbulu and Hanang districts in order to form impressions of the work being carried out. Villagers met were asked to give the most significant change that had taken place as a result of HLH programme activities.

Further details about the methodologies used are given in each sub-chapter.

2. HLH – an organisation with multiple objectives

While HLH started as a hospital, it has grown to take on responsibilities and activities far beyond what is normal for a hospital. The broad activity profile stems from a vision and a set of objectives which emphasise a holistic perspective on human well-being and development. The vision of HLH is *to cater for the needs of the whole human being, i.e. physically, mentally, spiritually and socially.*

This vision has been translated into the following set of objectives:

- Reducing the burden of disease;
- Poverty alleviation;
- Building and maintaining the institutional capacity of both HLH and its partners; and
- Improved collaboration with likeminded institutions.

By extending its focus beyond a mere reduction in the burden of disease – to food security, water supply, development of transport infrastructure, capacity building and education, and the support of marginalised and indigenous people – HLH has grown into a broad-spectrum development agent in a poor and remote area of the country.

This review acknowledges the multifaceted objectives of HLH and will consider HLH both as a hospital and as a development agent. The report is organised accordingly.

3. HLH as a hospital

HLH is located in the south-western corner of Mbulu district, Manayara region. The immediate catchment area of the hospital comprises 286,000 people from four divisions in three districts (Mbulu, Hanang and Iramba). The greater reference area is estimated at 1,971,000 people¹ and includes all divisions in the above-mentioned districts, as well as Meatu district (Shinyanga region), parts of Karatu district (Arusha region), and Singida Urban and Singida Rural districts (Singida region).

3.1 Efficiency of the hospital

An organisation is operating efficiently when its objectives are achieved at the lowest possible cost. Our review of the efficiency of HLH as a hospital will take the objective of reducing the burden of disease as the point of departure and ask whether this objective is achieved at the lowest possible cost. We distinguish between efficiency at two levels:

- 1) Efficiency in the composition of the service package
- 2) Efficiency in the provision of the current service package

3.1.1 The composition of the service package

In order to reduce the burden of disease in the area, HLH offers a wide range of services, both curative and preventive (see Appendix 4 for a list of the various service units/departments at HLH). The management is quite clear that HLH is not only concerned with the aggregate reduction of the burden of disease in the area; the burden of disease should be reduced in a way that is equitable and responsive to human rights and the rule of rescue. The practical implication is that the hospital has adopted an activity profile that does not maximise the reduction of the burden of disease per unit of resource inputs (i.e. standard cost-effectiveness), but deliberately operates with a somewhat more costly service package in order to secure for each patient his/her right to health.

The strong focus on equity at HLH implies that standard cost-effectiveness criteria cannot be used to assess the efficiency of the service package offered. A more in-depth analysis, beyond the scope of this review, will be needed.

Another fundamental strategy of the hospital is to provide high quality curative services as a way of building trust. A high level of trust is seen as a necessary factor for maximising the utilisation and uptake of preventive health services and practices. While it is often the case that preventive health services will reduce burden of disease more cost-effectively than curative services, it has often been a challenge to mobilise demand for preventive services. The strategy adopted by HLH, to offer curative services as a way of building trust and thus stimulating the demand for preventive services, seems to be gaining increasing international acceptance. At the same time, this strategy presents a challenge for analysing the efficiency of the hospital since it is difficult to determine how the various services contribute to building trust.

The review team acknowledges the ethical and strategic considerations behind HLH's approach to reducing the burden of disease. At the same time, we see a potential danger for the efficiency of HLH as a hospital in that the vague nature of objectives such as "equity" and "trust building" may

¹ Figures are from the Annual Report 2006.

become a barrier to reflection on the trade-offs involved in decisions about which service package to offer.²

We do not have any reason to question the way this balance has been struck in the past. According to the DMOs in Mbulu and Hanang, the services offered by HLH fit very well with the needs and priorities of the local communities. In terms of the relevance of the outreach work, the DC in Mbulu said that HLH is almost like a government provider in this corner of his district. He singled out in a very special way the HIV/AIDS work in the community. He said that this is an area where the district has not been very proactive, but HLH has done a job that the district would find very difficult to surpass. This favourable feedback notwithstanding, we encourage the hospital to reflect more explicitly on which service package to offer in years to come.

Recommendation:

Review the service package offered at HLH in light of the objectives of the hospital, focusing on the following questions:

- How far is HLH prepared to go in securing for each individual his/her right to health if this comes at the expense of a larger reduction in the aggregate burden of disease?
- What package of curative services is needed in order to build the required level of trust in the community?

3.1.2 The provision of the current service package

Taking the current service package as given, the efficiency of the hospital could best have been evaluated by comparing the outputs per unit of input at HLH with output/input ratios at other hospitals with a similar service package. But since we do not have access to data from similar hospitals, we have to confine ourselves to a review of the time trend in output/input ratios at HLH. The question we are asking is thus whether HLH has maintained its efficiency over time.

The output of a hospital can be evaluated both in quantitative and qualitative terms. The review team does not have access to data on the quality of the services offered. Neither do we have the required competence for evaluating quality by inspection. We noted, however, that others have described the services offered at HLH as being of very high quality. The fact that HLH attracts referral patients from large parts of northern Tanzania is a strong signal of the high perceived quality of the hospital.

When it comes to the quantitative output and input indicators of the hospital, a general word of caution is needed before digging into the figures. Reported figures may be misleading due to 1) inaccuracy in the registration of primary data, and 2) mistakes in the process of aggregating data into final statistics. We performed a quality control review of the outpatient registries and found that the quality of registration appears to have declined over time, in particular in 2007. There also seems to have been a period in 2006 where reattendances were not counted as they should have been. Moreover, there appears to be some confusion whether the OPD figures represent the number of patients or the total number of patient/doctor encounters (i.e., including revisits to the doctor's office after, for instance, a lab test). Finally, we found that the statistics department has several potential sources for the compilation of final statistics. It was not clear whether the statistics department consistently used the most reliable source of information.

² A first step towards deeper reflection around these issues could be to estimate the costs per DALY (Disability Adjusted Life Years) averted through the various services provided by the hospital. This would highlight the costs of achieving the objectives of "equity" and "trust building".

Based on these and other observations, we have the impression that the quality of the health management information systems at HLH is inadequate at present, and indeed not good enough to support decision making effectively.

The management has acknowledged this and is currently in the process of implementing a new health management information system. This should be a high priority in the near future, not only because reliable information about the running of the hospital is important for decision making and for the ability of management to gain support for reforms and new directions among staff, but also because the donor community is putting high emphasis on accountability and documentation of results.

Recommendations:

- Put high emphasis on the design and implementation of a new and more reliable health information system
- Design data entry procedures that maximise the probability of high quality data being entered into the system

Table 1 displays key quantitative output and input indicators for the hospital from 2004 to June 2007.

A rough indicator of aggregate output can be obtained by weighing outputs together into a *Standardised Unit of Output* (SUO) index (for details on how the SOU index has been calculated, see Appendix 6). Note that one SUO is here assumed to represent the equivalent of one OPD consultation. The overall picture is that aggregate output has remained fairly stable over the period. We observe a decline in the number of outpatients. But at the same time, the number of contacts through the RCHS clinics has increased significantly.

Table 1. Key output and input indicators

	2004	2005	2006	Jan – Jun 2007
Outputs				
Total no. of inpatients	11,029	11,321	11,082	6,537
Total no. of outpatients	79,077	76,226	64,000 ³	36,544
Total no. of deliveries	3,022	3,475	3,222	1,379
Total no. RCHS examinations	104,493	108,097	111,120	32,909
Total no. of immunisation doses	52,341	50,751	61,189	n.a.
Total no. of family planning contacts	2,618	2,290	3,365	n.a.
SUO (based on above outputs)	323,646	328,760	315,820	n.a.
Major operations	1,677	1,289	1,392	417
Minor operations	2,889	2,430	2,053	721
Inputs				
Total costs* (1,000 Tsh)	1,400,507	2,102,311	2,834,315	3,857,868
Total no. of staff	379	370	370	n.a.
Total no. of patient beds ⁴	350	350	350	350

Sources: Annual reports and audited financial costs. *Cost figures have been calculated as total expenditure minus transfers to Haydom Nursing School and minus incomes from HLH equipment and facilities. See Appendix 5.

³ This figure deviates from the reported figure of 50,129 outpatients in the annual report. We discovered that at least part of the reason for the sharp drop in the number of outpatients from 2005 to 2006 is probably mistakes or inconsistencies in how reattendances are counted. We re-estimated the number of outpatients in 2006 assuming that the share of reattendances in the total patient flow was the same as in previous years.

⁴ While the total number of beds is 350, up to 400 beds can be utilised in time of extreme need – extra beds are kept in a store for emergency needs.

The hospital management has expressed concern about the decline in the number of operations, mainly due to the lack of qualified personnel. There was a 25% reduction in the number of operations from 2004 to 2006. Despite this reduction, the number of inpatients has remained stable. Data from the first half of 2007 seems to indicate that the number of operations may fall even further in 2007. Seasonality might, however, explain the low number of operations during the first half of 2007; the number of operations has been about the same as in the first half of 2006.

On the input side, Table 1 shows that our measures of real resource inputs (i.e. the number of staff and the number of beds) have remained fairly stable. It should also be noted that the increase in outputs from RCHS clinics has occurred without expanding the number of clinics. Costs have increased substantially, though. As will be explained below, this is due to higher prices of inputs, in particular higher staff salaries. Since salaries follow the government pay scale, this increase must be attributed to external factors beyond the control of HLH.

Table 2 utilises data from Table 1 to calculate two indicators of efficiency:

- Costs per Standard Unit of Output
- Standard Unit of Output per staff member

Table 2. Efficiency indicators

	2004	2005	2006
Total costs per SUO (Tsh)	4,326	6,395	8,974
SUO per staff member	854	889	854

Since cost increases are almost completely due to external price increases, it does not make sense to use cost data in the measurement of efficiency over time. The only meaningful indicator is the SOU per staff, which shows a remarkably stable pattern. Note, however, that there is a methodological problem here, because the weights used in the construction of the SUOs are *relative costs*. If the relative *time* inputs differ from relative *cost* inputs, for instance due to more intensive use of medical supplies for certain services, the SOU figures per staff member may give a misleading picture of efficiency levels. With this caveat in mind, we conclude that HLH seems to have maintained its efficiency over time.

We also calculated a set of complementary performance indicators for the hospital (see Appendix 6 for an explanation of the indicators):

Table 3. Other performance indicators

	2004	2005	2006
Bed occupancy rate	96.7 %	94.8 %	98.9 %
Average length of stay	11.2 days	10.7 days	11.4 days
Average user fee per SUO (Tsh)	974 Tsh	1,236 Tsh	1,219 Tsh
SUO per staff per day	3.6	3.7	3.6
Staff per bed	1.09	1.06	1.06

The hospital is operating close to its capacity limit with an average bed occupancy ratio of close to 100%.

The average length of stay is around 11 days. This is up from 9 days in 2000. This figure should be interpreted with care because of the hospital's policy of not letting people leave until debts are fully paid.

The average user fee per SUO is a measure of the accessibility of the hospital. The figures can be interpreted as the patient costs of an average OPD consultation. The rate does not seem high in a Tanzanian context, although extensive provision of free services makes interpretation difficult. The increase in the average fee per SUO has occurred despite constant user fee rates in the period. Also note that the costs of producing the services have increased by more than 100% in the period.

The number of SUOs per staff per day is an indicator of the productivity of staff. In HLH this indicator is around 3.5. Compared to other hospitals, this is a bit on the low side. One would expect a ratio of 6 contacts per staff member. Although care should be taken with interpretations at this level of aggregation, the low value of this indicator makes it legitimate to ask whether the hospital is overstaffed. The staff per bed ratio is, however, within a normal range. Note also that there are a number of outreach services (e.g., Eye, Dental, Psychiatry, HIV/AIDS, Diabetes) which do not appear to be included in the measurement of the SUO.

3.2 Outreach activities

3.2.1 Decentralised Health Units

Three health centres and two dispensaries are run by HLH. Aggregate activity data for the three health centres (Balangdalalu, Gendabi and Kansay) are reported in Table 4.

Table 4. Key output indicators health centres

Outputs	2004	2005	2006
Total no. of inpatients	1,416	1,256	1,547
Total no. of outpatients	8,401	9,545	8,870
Total no. of deliveries	415	466	520
Total no. of RCHS examinations	16,379	18,815	20,356
Total no. of immunisation doses	22,044	19,421	13,776
Total no. of family planning contacts	485	500	417
SUO	44,557	44,257	47,817

Aggregate outputs have been stable or increasing over the last three years. However, there has been a sharp reduction in the number of immunisation doses, which should be further looked into.

The aggregate figures mask considerable heterogeneity in the output trends at the facility level. While outputs at Balangdalalu health centre have been stable, there has been a 22% reduction at Gendabi health centre and an 86% increase at Kansay health centre, mainly due to a sharp increase in the volume of RCHS services.

The team visited Gendabi health centre in Hanang district. This health centre has 35 beds and a staff of 9. In the last week before our visit, 64 patients had been admitted to the unit. There were 7 patients in the unit when visited. The doctor in charge said that a government dispensary in Dawari, 5 km away, had taken patients away from the health centre. Patients will come to Gendabi if there is no medicine in Dawari dispensary. This explains at least parts of the reduced activity levels at Gendabi.

Recommendation:

- If new government dispensaries and/or health centres are built in the area, HLH should review the scale and service profile of its decentralised service units

3.2.2 Reproductive and Child Health Services (RCHS)

The RCHS is a key component of the work of HLH to reduce the burden of disease in the community. HLH is running 1 static and 27 mobile RCHS clinics. Six of the clinics are accessed by plane. In addition, the three health centres also run 8 mobile clinics. The RCHS clinics provide a comprehensive package of services: antenatal services, immunisation, family planning, distribution of mosquito nets, HIV testing, and other mother and child health services.

When travelling around in the community and asking villagers what they knew about Haydom, all said that they knew about the hospital and the RCHS. In fact some men spoken with half jokingly said 'Haydom only helps women so better to speak with them'.

Sixteen women were spoken with in two villages and all had attended RCHS clinics. They said that they get all their check-ups and vaccinations and check that the baby is OK. Once they know the baby is OK they have the birth at home. When the baby is born they bring it to the clinic for weighing and vaccination. A clinic was visited in Wandela with over 100 children and 50 mothers present. At another clinic, more than 300 children had been attended in a single day. The clinics were very orderly and well organised. Eleven women were spoken with at Wandela clinic and all knew the date of the next clinic and understood very well the objective of each step from weighing to vaccination to having oneself checked for general health and HIV. When asked about the benefits of the outreach health unit they all said that it brought services closer to them. They said that they get vaccinations and other services from the unit which they would not get from a traditional birth attendant. They said that there is one particular advantage. If a woman has a problem such as the baby not lying properly in the womb, the nurses pick it up quickly and arrange for the birth in HLH. They further said 'If you go to a traditional birth attendant and they are unable to help you they will send you to the hospital but you may be late'.

These statements illustrate quite well that the HLH strategy of providing high quality hospital services is a key in mobilising demand for preventive health services.

3.3 Sustainability

In order to sustain its present level of activities, HLH needs to secure adequate access to financial as well as human resources. This section reviews the present financial and human resource situation at the hospital.

3.3.1 Financial resources

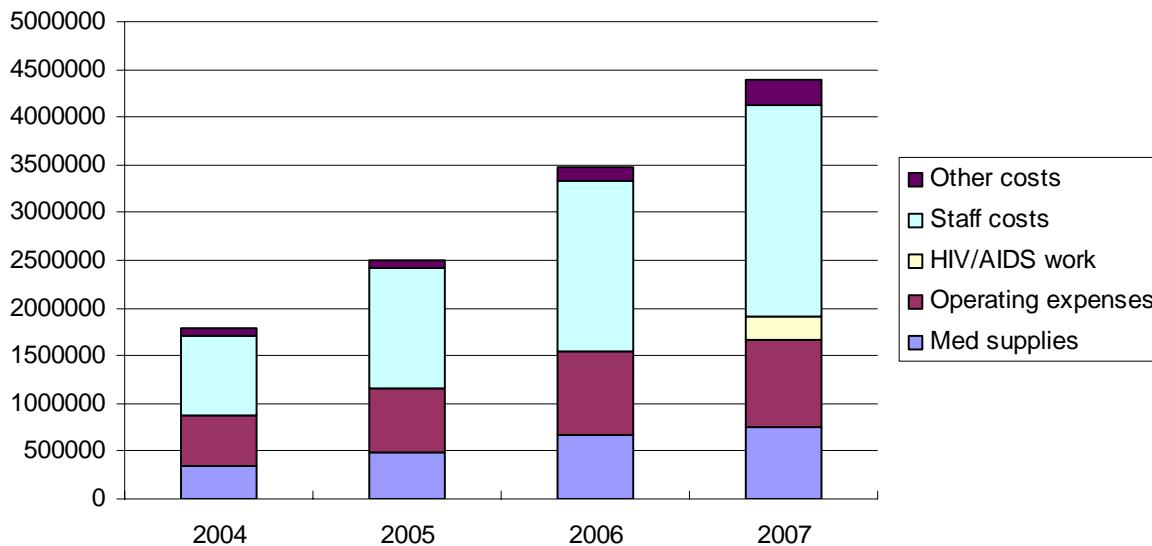
3.3.1.1 Expenditure

We assessed the trends in HLH's income and expenditure over the period 2004-2007. Data for 2007 come from the revised budget as of August 2007 while data for previous years are from audited financial reports.

The income and expenditure template has changed somewhat over the years. We will follow the template used in the audited financial report from 2006 with the following exceptions: 1)

depreciation has been excluded from the expenditure summary, and 2) subsidies to Haydom School of Nursing have been added to the expenditure. See Appendix 5 for detailed expenditure and income figures.

Figure 1: HLH expenditure, 2004-2006 and revised budgeted expenditure for 2007 (Tsh)



The costs of running HLH have increased dramatically from 2004 to 2007 – up by 139%. The most important driver for the cost increase is a huge increase in staff costs (+160%). The factors underlying the increase in staff costs are discussed at greater length below.

However, increased staff costs alone can explain only 56% of the aggregate cost increase. Another 10% is explained by the integration of the costs of the HIV/AIDS work into the ordinary operations of the hospital.⁵ The remaining 34% of the total increase comes both from higher costs of medical and clinical supplies and from larger operational expenses.

The costs of medical and clinical supplies have risen by 111%, primarily due to an increase of 275m Tsh in the costs of medical supplies. The other major explanation is higher prices for medicine, partly due to a government ban on the overseas purchase of medicine. The reason for the large rise in the cost of medical supplies, especially the increase from 107m Tsh in 2006 to the budget of 293m Tsh in 2007, should be looked into further.

Operating expenses have increased by 80% in the period. One should, however, not attribute the whole of this increase to the running of the hospital. HLH has a number of auxiliary service functions which partly provide services to the hospital and partly provide external services. There are also some services that operate almost exclusively as income generating activities for the hospital (e.g. an excavator). Since external service provision is included in the income and expenditure statements of the hospital, an increase in external service provision will show up in higher costs, but it should at the same time show up in higher incomes. As shown in Figure 2, income from HLH facilities and equipment increased steadily up to 2006. In the period 2004-2006,

⁵ According to management, the integration of the HIV/AIDS work into the hospital has reduced the costs of this programme by two thirds.

therefore, there is only a small increase in operating costs net of income from HLH facilities and equipment. Most of this can be attributed to general inflation.

However, a big change seems to be expected this year in that there is a projected decline in the income from HLH facilities and equipment while the operating costs continue to increase. For instance, there is no budgeted income from the workshop in 2007 (down from 131m Tsh in 2006). Nor is income from the caterpillar included. These appear to be mistakes in the budget.

It is noteworthy that the costs of administration and representation have been significantly reduced.

We found that it was sometimes difficult to identify the reasons for changes in various cost components over time, due to misleading or inconsistent accounting practices.

Recommendations:

- Improve the quality of the accounting practices
- Closely follow the trends in the cost of medical supplies and in operating costs net of income from HLH facilities and equipment
- Service units that primarily provide external services and are meant to be income generating activities for the hospital should be organised in separate profit units

3.3.1.2 Income

Due to the sharp increase in costs, HLH has become increasingly dependent on donor funds. HLH has not been able to increase significantly either patient fees or the grant received from the Government of Tanzania.

The following table shows how HLH has covered its cost increase (measured as the increase in total costs net of income from HLH facilities and equipment) from 2004 to 2006.

Table 5. Covering the increase in net costs, 2004-2006

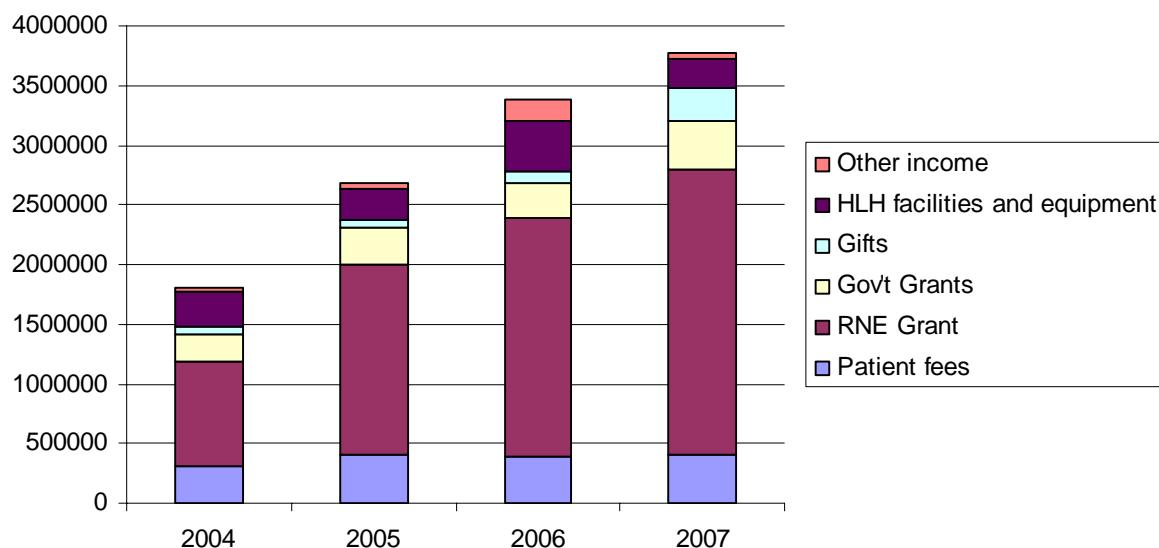
Income type	Share covered
Patient fees	5 %
RNE grant	78 %
Govt grants	4 %
Gifts	3 %
Other income	6 %
Uncovered	5 %

The RNE share of the total income increased from 48% in 2004 to 59% in 2006, and is expected to increase further to 64% in 2007.

The contract between HLH and the RNE for 2006-2010 entails a gradual reduction in the RNE grant from 2,400m Tsh (12m NOK) in 2007 to 1,060m Tsh (5.3m NOK) in 2010. This implies a reduction in income to HLH of 36% relative to the 2007 budget. At the same time, costs are likely to continue increasing, in particular salary costs (see below). Although there may be some possibilities to increase income from other sources (patient fees and government grants), they appear limited in the near future.

Without a renegotiation of the contract with the RNE, HLH will have to reduce its activities drastically in the coming three-year period.

Figure 2: HLH income sources, 2004-2006 and revised budgeted income for 2007 (Tsh)



3.3.1.3 Patient fees

Aggregate patient or user fees increased by 22% from 2004 to 2006, despite the fact that there has been no change in the rates since 2003. This could be due either to a higher number of consultations, which would be an indication that the level of activities reported in 2006 is too low, or to payments per consultation having increased, for instance due to more testing or the sale of more drugs. Despite the increase in user fees, the **cost recovery rate**, i.e. the share of user fees in total costs, declined from 22% in 2004 to 13% in 2006.

The following are examples from the current price list:

Table 6. Examples from price list

Outpatients:

No consultation fee

Payments for drugs and tests only

Inpatients (adults):

Price per day (includes most tests, medicines etc.) 2,500 Tsh

Major operations 35,000 Tsh

Minor operations 7,000 Tsh

The review team is not familiar with the price profile of government facilities in the area. But in other parts of Tanzania it is not uncommon to pay a consultation fee. In some places there is a comprehensive fee per outpatient consultation which includes the consultation plus any tests and

medication. Some drugs (e.g. ALU) appear to be sold at lower prices at HLH than in some government facilities.

Most of the user fees at HLH are collected from the daily charge for inpatients. An average inpatient will pay around 30,000 Tsh (150 NOK) for an 11-day stay at HLH. If having a major operation in addition, the total charge will be more than doubled.

To determine the level of the user fees is a complex decision where considerations about demand response, especially from less well-off patients, play together with the need to recover service costs.

We do not know, of course, how demand would be affected by a rise in prices. For the sake of illustration, we will nevertheless calculate the potential impact on revenues of some moderate price increases, assuming that demand remains unaffected. First, assume that user fees are adjusted upwards in line with general inflation. The inflation rate in Tanzania has been between 4% and 6% over the last three years.

Table 7. Inflation in Tanzania, % (Consumer Price Index)

Year	2004	2005	2006
Inflation rate	4.1	4.4	6.2

Source: Bank of Tanzania

This amounts to an aggregate price increase of 15%. A price increase of this magnitude – if it did not have any negative effect on demand – would increase HLH revenues by 58m Tsh annually (i.e. 290,000 NOK). Second, to introduce a consultation fee could potentially raise another 20m Tsh annually, assuming a rate of 300 Tsh per consultation, which is not uncommon in other parts of Tanzania. Third, an increase in the daily rate for inpatients of 500 Tsh per day could raise a maximum of around 60m Tsh, assuming that all patients pay in full. Fourth, an increase in the price of operations of 5,000 Tsh would bring in around 15m Tsh. In summary, these back-of-the-envelope calculations suggest that increased user fees would not bring HLH anywhere close to a solution of its future financial problems. Nevertheless, a revision of the user fee structure is apparently needed.

Recommendations:

- Regularly revise user fees in line with general inflation unless particular local circumstances dictate otherwise
- Ensure that the prices of drugs and tests are not lower than in government facilities
- For outpatients, consider implementing a consultation fee
- For inpatients, consider a general increase in fees as well as a change in the fee structure reflecting both willingness to pay and equity considerations
- Encourage research that investigates the demand response to various changes in the user fee structure

3.3.1.4 Income generating projects for HLH

HLH possess various assets that potentially can generate income for the hospital. The most recent of these and potentially the most important are Mulbadaw farm and the Central Maintenance Service Centre. Both are in Hanang district and were previously part of Hanang wheat farms. The total area of the farm is 5,390 hectares with 4,047 hectares suitable for wheat production. When fully operating, the farm is projected to raise an income of around 200m Tsh (i.e. 1m NOK) for the hospital annually.

To develop and run these assets, a company called Haydom Development Company (HDC) was set up. Unfortunately a dispute has arisen between HDC and HLH over these assets. The issue is currently in court. This has greatly affected the running of these potential income generating activities. To date, few of the above-mentioned objectives have been achieved.

From August 2006, the plan was to plant and cultivate around 40% of the farm area (2,200 hectares). Due to difficult rains and outbreaks of quealea quealea birds, cutworms and rats, the yield was only one third of the target. In the 12-month period from August 2006, the income and expenditure from the farm have been:

• Income	295,955,653/=
• Expenditure	623,426,059/=
• Loss	327,470,406/=

This loss has not affected the economic situation of the hospital.

Another important asset is the excavator (a Caterpillar). The team was told that since October 2006 the Caterpillar had brought in 320m Tsh to HLH. The net profit is unknown as the financial accounting system does not treat the caterpillar as a profit centre, but the profit was estimated at around 260m Tsh (1.3m NOK).

Recommendations:

- Treat projects whose main function is to generate income for the hospital as profit centres in the financial accounting system
- Adopt a hard-nosed business strategy for the purely income generating activities, stopping projects that run at a loss

3.3.2 Human resources

Besides financial resources, access to qualified and motivated staff is a key factor for the sustainability of HLH. The team reviewed the staffing profile of the hospital, attempting to identify trends in staffing levels. We also conducted five focus group discussions with staff members – doctors, nurses, clinical officers, medical attendants and technical personnel – in order to identify factors that are crucial for staff motivation, including issues that currently are of concern to the staff. The trade union was also consulted on these matters.

It was difficult to get a complete and reliable picture of staffing levels over time. Two sources of information were used, 1) master rolls from the Matron's office for the month of July in all years 2004-2007, and 2) a staff overview from the Human Resources Office as of September 2007. The two sources differed substantially on certain points, especially on the number of temporary staff.

Source (1) appears to provide the most reliable information about staffing levels over time. Apart from an upswing in 2005, the general picture is that the total number of staff has remained stable over time. This must be regarded as an achievement in a period that has witnessed concerted government efforts to attract more health workers into the public sector, at the same time as organisational change has created a turbulent time at HLH.

Staff expressed a concern that many nurses have been leaving HLH lately. Source (1) does not indicate any marked decline in the number of nurses. According to Source (2), on the other hand, the number of nurses appears to have declined significantly. Note, however, that part of the difference in the number of nurses between July and September 2007 might be explained by

different procedures for counting temporary staff. In addition to the 83 nurses on contract or in permanent positions in September 2007, 20 nurses are employed as daily workers.

Table 8. Staffing levels

	Staffing in July (Source 1)				Staffing in September (Source 2)
	2004	2005	2006	2007	2007
Doctors	8	8	8	5	11
Clinical officers	19	18	17	22	20
Nurses	109	120	121	110	83
Medical attendants	110	138	127	126	120
Pharmacy/Radiology/Physio	9	8	8	9	15
Workshop	22	11	19	23	30
Laundry	8	19	12	10	10
Guards	17	19	19	22	22
Treasury	7	7	7	7	7
Temporary staff (daily workers)	69	63	51	44	141
Libr/Tailor/Booksh/Records	8	10	10	11	10
Drivers	-	-	-	-	16
Laboratory	-	-	-	-	17
Administration	-	-	-	-	13
Other	-	-	-	-	11
Total (sum)	386	421	399	389	526
Total (from annual reports)	379	370	370	-	-

Sources: (1) Master rolls, (2) Staff overview.

One indicator of the attractiveness of HLH as a workplace is the number of nurses graduating from Haydom Nursing School who apply for a job at HLH. In the last two years, 65-85% of graduating nurses have applied for a job at HLH. After one year, however, only some 15% remain in their jobs.

The largest human resource challenge for HLH is the limited and unstable access to medical doctors, and in particular to specialists. Much of the hospital's reputation is built on stable access to highly skilled doctors and surgeons in particular. It has turned out to be difficult to attract medical doctors and specialists from other parts of Tanzania. The two other options are to cover the gaps with ex-pats or to train HLH's own personnel to become medical doctors and specialists.

Fourteen students are currently being trained as MDs and AMOs. Although the first graduating student will start working at HLH this year, it will realistically take at least 10-15 years to build up a sufficient pool of local MDs and specialists. In the meantime, HLH has to rely partly on ex-pats. For the near future, the most urgent needs will be covered by four additional expatriate surgeons who have agreed to join HLH on two-year contracts.

Recommendation:

- Set aside sufficient resources to attract the required number of medical doctors and specialists, through training of HLH's own staff for the long run and through various mechanisms for attracting specialists from other parts of Tanzania or from abroad in the short run.

What then do the staff say about their views on the changes that have taken place at HLH during the last couple of years and how the changes have affected their work motivation and the working environment?

- **A request for greater openness and transparency**

HLH has traditionally been organised with few written guidelines and policies. Continuity and oversight were ensured by heavy reliance on the personal involvement of the managing medical director. During his illness and death in 2005, a power vacuum seemed to arise. For some, this was an opportunity to obtain greater influence over decisions. For most of the staff, however, new decision makers and new decision making procedures have created problems in terms of reduced transparency.

There is general support among the staff for the development of more written policies and guidelines. At the same time the staff recognise that this is a potential threat for a few people who earlier enjoyed more discretionary power.

There is a widespread demand for more information about the reasons for decisions taken. For instance, staff requested information around issues of promotion, overtime payments, various allowances, and possibilities for further education through HLH.

- **A request for a closer relationship between management and staff**

Several staff members expressed a feeling of large distance between management and staff. There was a desire for more regular and more supportive supervision in the wards, requests for greater involvement by staff in decision making processes, and a need for more easily accessible ways of channelling complaints and frustrations to the management. Some acknowledged that the new organisational structure would most probably address some of these problems.

- **Perceptions of a lack of implementation force in the management team**

Some staff pointed out that conflicts of interest within management and vis-à-vis other influential persons in the organisation were preventing or delaying the implementation of necessary reforms.

- **Frustrations about removed privileges**

Strong complaints were raised about the decision taken earlier this year to stop sending nurses for upgrading. This was said to have greatly discouraged people. The management has explained that there will be training opportunities through distance learning in the future, but staff do not seem to have accepted this as an equally valuable alternative.

Another reform that has created frustration among some core staff is that the HIV/AIDS work has been integrated into hospital activities rather than organised as a separate unit. The previous organisation was quite lucrative for the people involved, due to generous allowances. But it created a division within the organisation between hospital staff and HIV/AIDS project staff. What has become a frustration for some is therefore a relief for others.

Despite some disagreement, we found general support among most people interviewed for the reform processes that have been initiated over the last two years, in particular for the efforts to increase transparency through formalisation of policies and guidelines, and also for the implementation of the new organisational structure. But there also seems to be some degree of uncertainty about the future, both due to the reform process itself and due to the feeling of a lack of transparency and open communication. In this situation, the organisation is vulnerable to reforms that remove privileges from large groups of staff.

There appears to be a need for a stronger involvement of staff in the decision making processes and/or improved information about the reasons for decisions taken. The development of a stronger internal information system on outputs, finances and human resources is crucial for enabling the management to provide such information in a timely and efficient manner.

Good equipment at HLH compared to many government facilities was mentioned as an important factor for staff retention.

Recommendations:

- Put greater effort into the implementation of agreed reforms, in particular the new organisational structure and the efforts to increase transparency, such as the formalisation of guidelines and policies and the strengthening of information systems
- Ensure that voices from the staff are efficiently communicated to the management (e.g. through formal meetings and informal discussions in each department). One concrete suggestion from staff was to take minutes at staff meetings, in particular when staff meet in smaller groups.
- Improve the systems of communication about decisions taken, and the reasons behind the decisions, in particular those decisions that affect staff benefits or other issues that are important for the working environment.
- Be careful about removing privileges from a large proportion of staff during the process of organisational change.

3.3.3 Impact of the new government wage policy

Total staff costs at HLH are projected to increase by 160% from 2004 to 2007. A breakdown of the trend in staff costs over the period is shown in the table below.

Table 9. Staff costs

	2004	2005	2006	2007	Increase (%)
Salaries, allowances and NSSF	626 862	1 088 012	1 392 603	1 715 589	174
Treatment of staff & relatives	6 637	5 750	14 893	11 980	8
Education grant expenses	99 768	157 743	246 810	250 000	151
NLM personnel expenses	115 405	-	147 428	230 000	99
Total staff costs	848 672	1 251 505	1 801 734	2 207 569	160

The main cost drivers come from the increase in salaries, allowances and insurance contributions (the NSSF contribution is 10% of the basic salary). Note that an increase in salaries also impacts on education grant expenses, because many students are paid a salary while in school.

The basic salary at HLH follows the pay scale of the public health sector, but HLH has its own allowance system. In principle, there can then be three explanations for the increase in staff costs:

- Higher salaries in the public sector
- Higher allowances at HLH
- Increase in the number of staff at HLH, or a change towards more highly qualified staff

As discussed above, there is little indication of any major increase in the staffing levels at HLH in the period. In order to assess whether the change in staff costs is due to a change in the government pay scale or to higher allowances, we investigated a breakdown of monthly payments to staff at six different points in time from June 2004 to July 2007. The figures show that basic salaries increased by 211% from June 2004 to July 2007. We conclude that the increase in salaries, allowances and NSSF contributions of 174% (Table 9) is primarily due to an increase in government salaries, and that less can be attributed to an increase in allowances. It was not possible to estimate the increase in allowances reliably because of several changes in the way allowances were accounted for and reported, but the management informed the team that there had been an upward adjustment of the allowance scales after many years without any change.

Previously, the promotion of staff at HLH used to be the responsibility of the government. This has to do with the fact that the government pays a staff grant for some of the HLH staff. The government has only occasionally fulfilled its obligations to promote staff. HLH recently decided to take responsibility for giving their staff the promotions that they rightfully deserve. This has caused an increase in salaries of 5-7% in 2007.

Due to the fact that the government is paying a staff grant to 82 employees at HLH, part of the increase in salary costs ought to be “automatically” covered by the government. However, the increase in staff grants has been much smaller than the increase in salaries; while salaries have increased by at least 170% (and probably more than that), staff grants have increased by only 89%. This discrepancy calls for some further explanation.

Table 10. Salaries and staff grants

	2004	2005	2006	2007	Increase, %
Salaries, allowances, NSSF and education	726 630	1 245 755	1 639 413	1 965 589	171
Staff grants from the government	209 407	268 031	283 466	395 979	89

This implies that HLH has been forced to cover a larger share of its salary costs from other sources.

It is not unlikely that real wages in the government sector will continue increasing. The need to ensure decent pay for civil servants has led the government to provide significant real wage increases over recent years and this development is likely to continue. In addition, Norway has recently taken a lead role in proposing the introduction of performance-based salary bonuses in the health sector. This alone may contribute to a 10-15% increase in salaries. As far as we are aware, there is no indication that the salary bonus will be extended beyond the public sector. Hence, this reform will put increasing financial pressure on the voluntary agencies.

So far, there are no strong signs that the new government wage policy has had a large impact on staffing levels at HLH. The automatic adjustment of salaries at HLH has been sufficient to retain staff.

3.4 HLH's place in the Tanzanian health system

The Tanzanian health system is comprised of three major groups of health service providers: 1) government facilities, 2) voluntary agencies, and 3) private-for-profit providers. HLH is registered as a private hospital under "The Private Hospitals (Regulation) Act No.6 of 1977 as amended by Act 26 of 1991", and is part of the voluntary agency sector, which mainly consists of various Christian and a few Muslim health facilities. The voluntary agency sector runs around 40% of the hospitals in Tanzania, in addition to a number of health centres and dispensaries.

HLH has been part of the Tanzanian central health plan since 1967. HLH appears to have excellent relations at both national and local government levels. The hospital sees the government as a key partner in the present as well as in future plans for the hospital. So too does the government see HLH as a key partner. Both central and district government officials spoke very highly of and were very conversant with the work of HLH. This is noted in other parts of the report. However, this positive attitude is not always backed by financial resources.

HLH is recognised by the government as a first level referral hospital. The hospital receives a staff grant for 82 of its employees and a bed grant for 250 beds, while the actual number is 350-400 beds. The staff grant is supposed to cover the full salary of the aforementioned employees and amounted to 283m Tsh in 2006. The bed grant, on the other hand, is only a symbolic payment of 50,000 Tsh per bed a year. This covers less than 1% of actual medical and operating expenditure at HLH, which also received 7m Tsh from the district basket funds in 2006.

In 2005/06, HLH unsuccessfully applied to become a second level referral hospital. The application was declined because HLH does not have a sufficient number of key staff according to the government staffing norms for second level referral hospitals. The following table summarises the government staffing requirements for some key cadres, as well as the deficits at HLH as of 2005. The most serious problem for HLH is the lack of specialists. There is also a lack of nurse/nurse-midwives, but this is to some extent compensated by an excess number of nursing officers. Note that the government requirements are calculated on the basis of 450 beds, which has implications in particular for the required number of staff in the nursing cadres.

Table 11. Staffing levels and deficits at HLH

Staff cadre	Government requirements 2005	HLH surplus / deficit in 2005	HLH surplus (deficit) in 2005 according to draft of new staffing guidelines
Specialists	6	(4)	(5)
Medical Officer general	7	(4)	(8)
AMO general	14	(8)	(4)
AMO specialists	3	(2)	(8)
Nursing Officer general	45	35	(70)
Specialist Nursing Officers	4	(4)	(32)
Nurse / Nurse Midwife	150	(90)	15
Medical Attendants	112	1	45
Laboratory technicians	8	(3)	0
Pharmacist	1	0	(1)
Pharmaceutical technicians	2	(1)	(6)

The Ministry of Health is currently revising its staffing norms. A draft of the new staffing norms was presented to the review team, and this draft provides the background for our calculations about

how HLH would fare relative to the new norm. The new norm is stipulated for a 300-bed hospital, but for the sake of comparison we have adjusted the required number in the nursing cadres proportionally so as to cater for 450 beds.

We observe that the new requirements suggest higher requirements for specialists, medical officers and Assistant Medical Officers (AMOs) with a specialty. Moreover, there is a huge increase in the required number of nursing officers and specialist nursing officers, whereas the required number of nurse-midwives and medical attendants is significantly reduced. If this draft is implemented, HLH will have even greater difficulty in fulfilling staff requirements in future applications.

To attract specialists to Haydom from other parts of the country will be difficult, partly due to the location of HLH in a remote area and partly due to the low total number of specialists in Tanzania. The only realistic possibility for reaching the required number of specialists seems to be for HLH to train its own staff. According to the management, this is also likely to be less expensive than to attract specialists by paying high salaries/allowances. The main problem is that the training of a sufficient number of candidates will take many years to complete.

There seems to be a need to raise the question why HLH should want to become a second level referral hospital. Apparently, the justification has been that an upgrading would imply that HLH would be recognised at its actual size and not only as a 250-bed hospital, and would thereby receive higher government grants. Based on 2006 figures, a proportional increase in the staff grant, with an increase from 250 to 350 beds, would imply an additional staff grant of 115m Tsh annually. However, there is no guarantee that an upgrading will release higher staff grants. There is also a potential threat in that the government is going to build a regional hospital, which is equivalent to a second level referral hospital, in Babati district, Manyara region. According to officials from the Ministry of Health, the building of new government hospitals in the same region might negatively affect the grants allocated to HLH. Although the management at HLH believes that this reasoning is misleading, the example illustrates the lack of clarity about what obligations the government is ready to take on vis-à-vis the voluntary agencies. The implication is that the financial consequences of upgrading to a second level referral hospital are quite unclear.

HLH is still struggling to obtain a reasonable share of the district health basket funds from all the districts and regions served by the hospital. For instance, the extensive network of RCHS clinics provides services free of charge in a number of districts in two different regions, but only a small share of the expenses is covered by the respective local governments. HLH has made efforts to increase its share of the district health basket funds, but success has been limited so far. This problem appears to be caused by lack of coordination between local administrative units, or maybe a game in which local governments are trying to “free ride” on the contributions from others. Most likely, however, it also reflects an attitude that seems to be present all the way up to the ministerial level, that the voluntary agencies are able to make their way through support from foreign sources, so why should the government take financial responsibility?

Over recent years, HLH has increasingly taken on an advocacy role vis-à-vis local and central government, as well as other stakeholders. HLH has been involved in a number of health policy issues, e.g. public-private partnerships, human resources, basket funding/budget support, Joint Rehabilitation Fund, the effect of various national policies (TB/HIV/malaria), and the issue of horizontal vs. vertical programmes. Two major obstacles have been noted for the ability of HLH to play an influential role through advocacy. First, the location of HLH far from Dar es Salaam makes it difficult to act effectively as an advocacy agent. Second, it appears to the team that the Christian Social Service Commission (CSSC), which is supposed to coordinate the communication between voluntary agencies and the government, is not offering the support and level of advocacy required at this critical time. This was noted by government officials at both local and central levels.

Recommendations:

- Critically evaluate both the financial benefits and costs of becoming a second level referral hospital
- Continue the efforts to obtain a fair share of district health basket funds
- Consider which parts of the advocacy function HLH should pursue on its own and in which areas it would be more efficient to partner with other institutions

4. HLH as a development agent

In addition to serving as a hospital, HLH has played an important role in the general development of the Mbulu district as well as the surrounding districts of Hanang and Iramba. Part of this development comes from HLH itself being a large employer, and from the income that this brings to the area. But in addition, HLH has facilitated a large number of development projects in the area, which has improved the livelihoods of many people. In practice, HLH is currently functioning as a strong, local developmental NGO in a remote area of Tanzania.

The districts served by HLH are among the poorest districts in Tanzania. Almost 50% of the population are estimated to live below the poverty line.

Table 12. Poverty levels

	Share of population below poverty line (2002)
Mbulu	49
Hanang	49
Iramba	43
Tanzania	36

Source: Tanzania Poverty and Human Development Report 2005. REPOA

Historically, most of the development projects administered through HLH seem to have originated from the hospital's vision of reducing the population's vulnerability to ill health, broadly speaking. The projects fall mainly within the following categories:

- Food security and clean water (famine relief, agricultural projects, boreholes and dams)
- Transport infrastructure (roads, bridges, air strips)
- Capacity building/education (construction of primary and secondary schools, nursing school)

During recent years, HLH has in addition been strongly involved in projects on:

- Culture, indigenous people's rights, and the co-existence of diverse ethnic groups

In addition to mobilising and channelling resources to development projects, HLH operates as a voice from civil society vis-à-vis government bodies. In its dialogue with government bodies, HLH has increasingly emphasised the government's responsibility for the development of the area, including the continuation of the projects initiated by HLH. There are several examples where the government has taken over responsibility for the operation of projects after HLH has made its contribution. For instance, the government has taken responsibility for the running of schools, including Dr. Olsen Secondary School, as well as the police station.

The close relationship between HLH and the local communities has enabled the hospital to respond in a timely and efficient manner to local needs and emergencies. Village committees have been established in 45 villages with the purpose of identifying need, targeting assistance and identifying priorities for development projects. HLH's high degree of responsiveness is combined with a fine understanding in the management about the danger that community assistance from HLH can

develop into excessive and unnecessary dependency. These considerations led HLH not to provide any food support in 2007.

All development projects administered by HLH are funded from external sources and operate in financial independence of the hospital.

4.1 Examples of development projects

The HLH strategic plan 2002–2006 carries a comprehensive list of all development projects carried out from the start of HLH until 2001. The table below shows the main activities over the last three-and-a-half years:

Table 13. Expenditure on development projects (Tsh)

	2004	2005	2006	Jan-Jun 2007	Total	Share
Famine relief	664 568	-	47 690	-	712 259	52 %
Culture and co-existence	30 000	23 000	100 944	38 804	192 747	14 %
Secondary school	-	65 994	23 382	48 761	138 136	10 %
Girls' hostel	-	134 321	101 534	17 104	252 959	18 %
Nursery school	10 929	2 435	-	-	13 364	1 %
Indigenous people water	-	-	55 480	12 483	67 963	5 %
Total	705 497	225 750	329 030	117 151	1 377 428	100 %

4.1.1.1 Food for work

The largest projects have been the food relief projects in times of acute food shortage, conducted on a food for work basis. For example, in 2004 almost 2,400 metric tons of food were distributed to 41,629 households in 180 villages.

HLH has organised permanent village committees in 45 villages. A committee of 7 people has two or three women, in addition to representatives of the village government, church leaders and respected elders. This committee divides villagers into three categories: those with enough food, those with little and those with none. Food is given to those with no food on the basis of work done. The work to be carried out is agreed with the village beforehand, examples including roads, water dams and schools. Food is also given out through schools to ensure that children continue to attend school at such a time of crisis.

HLH also encourages people to plant more drought-resistant crops. People in the area have come to depend too much on maize and beans, which are not particularly drought resistant. HLH also therefore provides sorghum seeds when giving out food in the hope that people will plant it.

The District Commissioner praised the food for work project as he said that HLH covers a remote area that would be difficult for the district administration to reach. He praised especially the work with the Hadzabe in Yaeda Chini. "Food for work projects developed an infrastructure for this community that the government was unable to do", he said.

The food support programmes run by HLH appear to be quite well targeted compared to other similar programmes. HLH has managed to differentiate the degree of support both between villages and within villages, depending on the actual need. HLH also seems to have been intelligent in

withdrawing the support when it is no longer needed. It is a common problem that many food support programmes continue the support for too long.

4.1.1.2 Four Corners cultural programme

A quite unique project that has recently been initiated is the Four Corners cultural programme, built around a cultural centre at Haydom. It was initially started as a celebration of the fact that the four major linguistic groups – Nilotc, Cushite, Bantu and Khoisan – all reside around Haydom. The project has developed into a forum for presenting and taking care of tradition and culture, as well as a regular meeting place for elders from the respective groups. It is designed to create more understanding and contribute to knowledge sharing within one of the six key thematic areas – health, environment, livelihoods, education, values and governance. One issue that has been discussed in this forum is the question of land use, which is crucial for all the different groups and a potential source of friction. Another interesting issue that has been raised is why the women in one of the groups seem to be much more effective than the others in birth spacing.

The government has shown great interest in the Four Corners programme and has now been invited as a fifth partner. This is important for channelling information from the local communities to the government. In fact, HLH has also been invited as a partner because of its important role in the development of the area.

4.1.1.3 Dr Olsen Secondary School and the girls' hostel

Dr Olsen Secondary School is situated on the outskirts of Haydom village. The school has grown from 80 pupils in 1997 to 806 in 2007. The school has 22 teachers, fully paid for by the government. In 2006, the school ranked as number one (out of 15 schools) in Mbulu district and 309 (out of 944) in the country.

HLH has been a pivotal part of the development of the school. Many of the newer buildings have been constructed with Norwegian support, both from Friends of Haydom and from others.

NORAD has supported a programme of exchange visits between Dr Olsen Secondary School and Øya Secondary School in Norway. These visits have led to two income generating projects for Dr Olsen Secondary School - a cow project and a card-making project.

In order to improve access to education for girls, it was decided to build a girls' hostel. Previously girls had to stay in lodgings in town and this proved unsafe. The hostel has just opened and has a capacity for 120 students. So far, 77 girls have moved in.

4.1.1.4 Nursery school

HLH has helped the local church build a nursery school. The school now has five teachers and 130 pupils. After the government made nursery school attendance compulsory, Haydom nursery school became the nursery for Haydom primary school. The local church runs the school and pays teachers' salaries. But because children have to pay a fee in order to attend, a significant number – about 100 according to the teachers – are unable to do so.

4.1.1.5 Water projects

HLH has administered a number of water projects, including more than 20 boreholes in various communities, a 17 km long pipeline to serve the hospital and the village, and dams that are used to store water through the dry season. The team visited some of the water pumps and found them

operating and used by the people. One of the dams was also visited. The water was collected behind a large hand-dug dike, built on food-for-work basis. Water was still available when we visited, towards the end of the dry season. We also observed that local people were maintaining the dike.

4.1.1.6 Other projects

HLH has administered the construction of 139 kms of roads, some on a food-for-work basis and some on a cash transfer basis. This has greatly enhanced access to health services in the area, both through the hospital and through the RCHS clinics, and has at the same time strengthened economic opportunities for the communities.

HLH has contributed to the completion of seven primary schools in Haydom and surrounding villages. Plans are currently under way for a vocational training school in Haydom.

One of the more unusual projects, supported through the Friends of Haydom, is the construction of a police station in Haydom. The station was officially opened on 6 August 2007 and the officer in charge said that the station was already having an impact. As well as providing more security for the community, he said that TANESCO is going to open an office on 1 October 2007 to help the local community as well as collect electricity bills there in Haydom instead of obliging customers to go to Mbulu. He said that due to increased security one of the banks was also considering opening an office in Haydom. He also told the team that a couple of local investors had approached the station about the possibility of extra security if they brought new investment to the area. This he was able to guarantee as he currently had 6 officers and expected to get 14 more in October, he said.

When HLH management was informed of these developments, the managing medical director said that the rationale for helping to build a police station was precisely that – to bring investment and new services, such as banks, into the area.

The Mulbadaw farm, despite primarily being a potential source of income for the hospital, can also be viewed in a broader development perspective. There are plans for capacity building for local farmers, construction of local water dams and other services. Moreover, a food security project at the farm in 2006 supported 198 local families as well as local schools.

4.2 Relevance of development projects

Most of the development projects have directly addressed basic human needs (access to food, water and health services) and are clearly relevant to the development of the area. A few projects – such as the pipeline water supply in Haydom – have originated in the needs of the hospital. But these needs were at the same time the needs of the community and HLH addressed these as well as their own.

We would also emphasise the strong relevance of the cultural centre. This is a project of immense potential. There is a growing recognition that understanding of culture has been one of the major missing links in Western-led development. The language of development is rarely the language of local communities. Some development theorists therefore argue that we must locate our approaches to development or change in the roots of the community – know their worldview, language, values and so on and then develop new initiatives out of this knowledge and understanding. This is what the cultural centre is trying to do. The fact that there are no blueprints for a cultural approach means that there has to be close dialogue and trust between the different partners. The meetings held to date show that this dialogue has started and that there is great community interest. The centre offers great potential for enhancing understanding by all parties of the differing worldviews and priorities.

4.3 Impacts of development projects

The scope of this review offers no room for rigorous assessment of the impacts of the HLH interventions. We have to confine ourselves to reporting the perceived impacts reported by local people and observed by the team. A number of perceived impacts have been mentioned above in the description of the various projects. Here, we would like to highlight the following impacts concerning improved health and poverty alleviation:

1) Reduced vulnerability

The expansion of the infrastructure network in the area has undoubtedly reduced the population's vulnerability to ill health. Roads and airstrips have made it possible to reach several thousand children and mothers every month with basic preventive health services. And the same roads are easing access to the hospital for the sick. In particular, the roads have improved the ambulance service of the hospital, which is crucial, for instance, in the prevention of maternal deaths.

Security against crop failures and other natural disasters has been greatly enhanced through the famine relief projects as well as the water projects.

Security has also been improved by the construction of a police station in Haydom and by the construction of a girl's hostel at the secondary school.

2) Enhanced opportunities

HLH has contributed to enhanced opportunities for education through the construction of primary schools, a secondary school and a nursery school, as well as the establishment of Haydom Nursing School.

Transport infrastructure has provided opportunities for new types of economic activity and more trade in the area.

The hospital itself has clearly also been immensely important to the development of the area by creating earning opportunities and thus stimulating the development of local markets and services outside the hospital. Some officials noted that the development of Haydom has helped to bring high quality services close to remote rural communities. While the hospital was built in the middle of nowhere, Haydom is fast becoming a town. Officials saw the support of such institutions as one concrete way to offer alternatives to the rapid urbanisation under way in Tanzania.

3) Empowerment

HLH is acting as part of civil society in the area in raising awareness and channelling information about local needs to the government. There is of course a possibility that the presence of HLH has led local governments to make smaller efforts in developing the area than they otherwise would have done, assuming that HLH would take on some of the government's responsibilities. Having observed other remote areas in Tanzania, there is, however, little doubt that these areas rarely receive adequate attention from their respective local governments. In the case of Haydom, there are several examples of development activities initiated by HLH serving as a catalyst for larger government involvement in the area. For instance, Endagulda primary school was initially built from local materials, but when the government saw the efforts of the local community it built a concrete block school for them. Thus, HLH seems to have been effective in empowering the local community vis-à-vis government bodies. The District Commissioner in Mbulu conceded that most

of the development that has taken place in the fringes of the districts of Mbulu, Hanang and Iramba is due to HLH.

The establishment of village committees with responsibility for choosing development projects is an example of HLH empowering local communities to take control of the direction of their own development. Government officials all said that HLH development projects are very much driven by the community. One district government official said, 'they developed more health units in the community and they bought an ambulance to enable villagers in outlying areas to have access to the hospital. To get the ambulance functioning they needed better roads so food for work was used to improve the roads and so on'.

The cultural centre offers another example of empowerment of local communities. The meetings between elders from diverse ethnic groups and between elders and government representatives have established new channels of communication that will increase understanding and prevent friction. Also, the celebration of the different cultures and traditions will hopefully contribute to removing the stigmas of backwardness attached to some of the communities.

All district government officials had great praise for the work of HLH both in curative health care and in general development in the community. One official said that 'this is the best institution in the region'. District officials said they like to send visitors to Haydom as there is something significant to show, and they also know that visitors will be very well received. The DMO in Mbulu said that as a mark of their appreciation and support of HLH, the district council pays the licenses for the five airstrips used for HLH's RCHS outreach programme.

It is our impression that the apparent success of HLH as a development agent in the area has come about despite the lack of an explicit development strategy. Development activities have, however, emerged from a thorough understanding of people's needs, and from a genuine interest in addressing those needs. Projects have been implemented by drawing on competence and resources that have been developed within the hospital itself.

Some of the factors that appear to have increased the effectiveness of HLH as a development agent are:

- A long-term presence in the area, which has facilitated a deeper understanding of local needs and priorities
- The ability to build trust in the community through the provision of quality health services; the fact that the hospital is bringing observable improvements in health also strengthens trust in HLH as a development agent
- The development of a large, high standard workshop: although the main function of the workshop has been to build and maintain the hospital and its supporting infrastructure, the competence and equipment that have been developed and acquired over the years have become a huge asset, especially for infrastructural development projects.⁶ It has placed HLH in a unique position to facilitate infrastructural development in the area.

⁶ The list of equipment includes four trucks, four lorries, four tractors, one excavator, one compressor and one cesspit emptying facility, among many other things.

5. A future for HLH

The last few years have been a turbulent time for HLH. The new management that was appointed in 2005 arrived at a hospital with a very small administration and few written policies and guidelines. It was quite obvious that reform was needed in the way the hospital was organised and managed. Comprehensive reform processes were planned and initiated, but implementation was slow or did not take place at all. It was concluded that the organisation, in particular the small administration, had become overloaded with reform initiatives and it was decided to focus on a few core reform processes (i.e. the organisational structure, the health management information system, the financial system and the formalisation of core policies and guidelines). Although the majority of staff appear to look favourably on most of these reforms, influential individuals in the organisation seem to have been working against them.

At this time of organisational restructuring and turbulence, HLH has nevertheless managed to sustain its level of activity almost at the same level as in previous years. A decline in the number of outpatients and the number of operations during the last few years has been largely compensated by higher outputs in the RCHS clinics. Since some of the reductions in activity levels are due to a reduced number of staff (e.g. the smaller number of surgeons), the general impression is that the efficiency level of the hospital has been satisfactorily maintained.

Despite signs of a decline in the number of staff in some cadres, in particular among surgeons and nurses, the broad picture is that HLH has been successful in retaining staff in a period when the government has made a considerable effort to attract health workers into government posts. However, the costs of this achievement have been huge, especially since HLH has been forced to adapt to large increases in the salary levels in the government health sector. HLH is still under constant pressure to maintain and improve worker benefits in order to retain staff.

5.1 Major challenges

In order to sustain the present level of activity at HLH, the following appear to be the main challenges:

- Strengthen the financial base
- Attract and retain qualified staff
- Implement a new organisational structure and new information systems
- Manage the change processes to maintain staff motivation

5.1.1 Strengthen the financial base

The RNE is expected to contribute 64% of HLH's income in 2007. According to the contract between the RNE and HLH, the RNE contribution will decline by 56% between 2007 and 2010 and disappear completely thereafter, unless a new contract is negotiated. In reality, this is a plan for the discontinuation of HLH in its present form.

The financial base of the hospital is further threatened by a projected increase in future costs. Government salaries are likely to increase further, not only because of civil service reforms but also because donors – and Norway in particular – will most likely contribute to higher health worker benefits through performance bonuses. Another source of increased future costs is the planned, and necessary, expansion of the administration at HLH and the increased resources that need to be put into new information systems and other accountability measures.

Financial challenges may also arise from the demand side. Government policy is now to build dispensaries and health centres in every village and ward. New hospitals are also being constructed; for instance, a new regional hospital will be constructed in Babati. In general, more government facilities will make it more difficult to attract patients. There will less scope for increasing user fees and in some cases user fees may have to be reduced because the government is offering a number of services free of charge. Some of the health centres run by HLH have already experienced a declining number of patients due to the competition from government facilities. A close eye should therefore be kept on the activity levels of these decentralised service units and their basis for continued existence. For the hospital itself, however, the building of new government facilities does not pose a big threat as it is improbable that a new hospital will be established close to Haydom.

As part of the discussion on how to secure the future financial basis for HLH, the following issues also need to be addressed:

- how to define HLH's role in the Tanzanian health system
- how to arrange HLH's governance structures, including the role of ELCT in the governance of the hospital vis-à-vis the role of external donors
- how to define HLH's role as a development agent in the area.

A more comprehensive discussion of how to approach the financial challenge is presented below.

5.1.2 Attract and retain qualified staff

So far, HLH has been able to retain most staff despite government efforts to attract workers to its own facilities. This has been achieved by matching the dramatic increase in government salaries over the past two years. But HLH has not been able to match the recent increase in the pension benefits offered to government employees. The DMO in Hanang said that a senior health person in a district with 15 years of experience now will be able to draw a lump sum pension of 70m Tsh on retirement – almost fifty times more than Haydom can pay. Nevertheless, it does not seem as though the pension reform has attracted many workers over to the government. Management at HLH expects the parliament to address the obvious injustice in the pension system over the coming years.

Training of its own staff is the strategy currently followed by HLH in order to ensure access to highly qualified personnel. Haydom Nursing School has provided the hospital with a stable supply of nurses since the 1980s. The recent removal of the contract period after graduation is likely to reduce the uptake in the hospital somewhat, but most students are still starting their professional career at HLH. For many nurses, the opportunities for further training appear to be an important aspect of the job. In order to maintain a sufficient stock of senior nurses at HLH, a good proportion of the nurses therefore need to receive further training opportunities. It remains to be seen how HLH nurses will value the system of distance learning compared to the old system of an ordinary scholarship, and how this will affect the supply of nurses at HLH.

The most difficult people to attract to Haydom are medical officers and specialists. Without stable access to highly qualified staff, community trust in HLH may rapidly dwindle, leading to reduced demand and lower incomes. HLH offers outside training opportunities for its own staff to become medical officers and specialists. Since the students are beginning to graduate only this year, it is not yet known to what extent – and for how long – HLH will be able to retain such staff. Nevertheless, back-of-the-envelope calculations suggest that the current strategy will probably be cost-effective. The team is not aware of any plans, though, for how many people need to be trained in order to fulfil future needs.

With similar monetary benefits as in the government sector, major attractions for taking up a post at HLH continue to be the high standards of equipment and supplies and the high professional standards at the hospital. Close and supportive supervision appears to be a key factor in maintaining these standards into the future.

Recommendations:

- Continue pursuing present strategies for the training of HRH's own staff to achieve increased self-sufficiency of personnel in the long run
- In the short run, maintain a high level of expertise by attracting highly qualified personnel from abroad or from other parts of Tanzania
- Carefully monitor the flow of nurses into and out of HLH and the stock of senior nurses. Ensure that a good proportion of the nurses have access to valued further training opportunities
- Make a plan for training a sufficient number of medical doctors and specialists to fulfil future needs, taking into account the difficulties that will be faced in retaining these staff for a long time at HLH
- Monitor the impact of government pension reforms on attrition rates
- Ensure that supportive supervision is implemented as a means of maintaining high professional standards and a motivated workforce

5.1.3 Implement a new organisational structure and new information systems

HLH, like many other faith-based institutions, has been run with a small administration and extensive reliance on trust within the organisation. As a result, there are weak information systems and few people available to implement reforms. With HLH's heavy reliance on external funding, accountability mechanisms have to be strengthened in order to assure the donors that HLH is spending their resources efficiently.

Initially, HLH has to ensure the quality of the basic systems for registering primary data – in accounting, health management and statistical records. The next step is to develop information systems – financial and health management information systems – that will provide managers with the information they need to make good decisions. One example is the need to establish profit centres for major income generating activities in order to be able to assess the contribution of each of the activities as a basis for decisions about their continuation.

A new organisational structure with a larger management group and more decentralised decision making is about to be implemented. An important challenge is to make the new leaders take responsibility for the implementation of reform as an integral part of the management team.

5.1.4 Manage the change processes so as to maintain staff motivation

High motivation of staff is crucial both for retaining staff and for maintaining high quality services. A period of reform is normally also a period fraught with fear and uncertainty among staff. Change is usually threatening, and may be even more so in a remote rural community. While change is necessary and inevitable, it needs to be handled carefully, with patience and sensitivity. The challenge for the management is to help staff cope with their fears and at the same time see the need for change.

It is our impression that there have been instances where the change processes could have been managed differently in order to generate less resistance among staff. We therefore encourage management to carefully consider its change management strategy.

Recommendation:

- That the management is explicit about its change management strategy and systematically evaluates its performance in managing change, in cooperation with representatives of staff

5.2 Closing the financial gap

HLH will never become financially self-sustaining in its present form. No institution which aims at making high-quality health services accessible to poor people can avoid relying on external support, either from the government or from other donors. At the moment, there appear to be three main sources that possibly can contribute to closing the financial gap at HLH: 1) the Government of Tanzania, 2) the RNE, and 3) foreign private donors (individuals or institutions).

5.2.1 Increased funding from the Government of Tanzania

5.2.1.1 *Increased funding of the recurrent budget*

Voluntary agencies that receive government support belong to two groups. First, there are so-called designated hospitals, which receive government funding for all their recurrent expenditure. Second, there are voluntary agencies, which receive a staff grant and a bed grant that cover only a smaller share of the costs. HLH belongs to the latter group. The largest potential for an increase in funding from the government side probably lies in a change in status to a designated hospital.

To obtain status as a designated hospital is not likely to be an easy task, though. Most designated hospitals function as district hospitals in districts without a government hospital, but Mbulu district already has a district hospital. To become a regional designated hospital is not an option since HLH is placed too far away from the regional capital, and because construction of a new regional hospital is underway. The remaining option is to become a designated referral hospital as a complement to other referral hospitals in the area. From the government side, this might, however, seem like duplication of activities, even though geographical distances are so large in the area that the issue of duplication is more a theoretical than a practical concern.

For HLH to become a designated hospital therefore requires strong political will in the Ministry of Health. Not only must there be acceptance of the idea of a publicly funded hospital in addition to the “normal” hospital structure in the country. In addition, public funding of HLH at the present level of activities requires a will to maintain higher standards of health services in this part of the country than in other similar areas.

If it is not possible to become a designated hospital, the next option is to try to increase the share of recurrent expenditure financed by the government by extending the staff grant to a larger number of employees. At present, HLH receives a staff grant for only 15% of staff (including temporary staff). The team has not been able to go into the basis for the current staff grant allocation but has noted that the number of staff paid for by the government (82) is much smaller than the official staffing norms for a first referral hospital of 100 beds. We are aware that HLH has tried several times to increase the share of staff on a staff grant, but in vain. Nevertheless, the team is unsure whether this alternative has been sufficiently explored. Government policies on these matters do not seem to be very predictable, implying that good and persistent advocacy may have an effect.

The application for an upgrading of HLH to a second level referral hospital was indeed an implicit attempt to increase the share of staff eligible for a staff grant. As already noted, however, it is not obvious that a change in status would have released higher staff grants.

Against this background, the prospects for obtaining significantly higher government funding do not appear very promising at this point in time, unless HLH is able to mobilise the required political will through effective advocacy.

5.2.1.2 Becoming a teaching hospital

An important objective for the Ministry of Health is to increase the availability of health professionals in Tanzania, both because of the present shortages and because of its long-term plan to increase the number of dispensaries and health centres. Another key theme is to support and retain qualified health staff in remote rural areas. Ministry of Health officials felt that HLH could play a key role here.

HLH is well positioned to expand its training outputs. HLH has run a nursing school for decades and has recently signalled its interest in establishing an Assistant Medical Officer (AMO) school at Haydom. Training of other cadres would clearly also be feasible.

The most critical factor for obtaining status as a teaching hospital will be the availability of qualified tutors. Government officials said, however, that it would be less demanding to qualify as a teaching hospital than as a second level referral hospital, because fewer specialists would be needed, and because it would be acceptable to have specialists attending HLH on a rotation basis. Officials in the Ministry of Health suggested establishing a strategic arrangement with KCMC and possibly become a faculty of KCMC as one way of improving access to qualified tutors.

It is a basic premise for HLH that any additional training outputs at Haydom should be fully financed by the government. Although becoming a training hospital would not imply additional financial resources being given to HLH directly, it might nevertheless address part of the financial gap by availing more human resources (tutors and interns) to the hospital. But since the number of people that could potentially be removed from the HLH payroll is small relative to the financial gap, becoming a teaching hospital would be no financial panacea for the hospital.

In order to attract an AMO school or other training schools to Haydom, HLH needs to convince the government that it is better to place such schools at Haydom than at a more centrally placed referral hospital. The main selling arguments for HLH are:

- HLH's high and stable access to patients
- HLH's good equipment
- HLH's proven capacity in implementation
- That a teaching hospital at HLH would be an effective instrument for supporting and retaining senior health professionals in a rural area
- HLH's ability to attract tutors from overseas

It remains to be seen whether these arguments are convincing enough to release the required government funding.

Recommendations:

- Explore the possibilities of becoming a teaching hospital, either as a faculty under KCMC or as an independent institution

- Make continued and systematic attempts to increase the share of staff on a government staff grant

5.2.2 Increased funding from foreign private donors

HLH enjoys strong support from private donors in Norway, especially through “Friends of Haydom”. To date, this support has been channelled mainly to investment projects at the hospital as well as to development projects in the area, and less to the financing of recurrent costs.

To base the funding of a hospital’s recurrent expenditures on private donations is risky business. In order to ensure predictability, such resources would have to be drawn from a permanent fund. With an expected rate of return of 6-8%, a fund of the magnitude of 150-200m NOK would suffice in order to close the current financial gap at HLH.

The review team has not been in a position to evaluate the realism of this alternative. But the management of the hospital firmly believes that it should be possible to engage private donors, institutions and global partnerships in a dialogue aimed at securing this type of funding. It realises, however, that it will take time to secure the large amounts of capital needed.

Note that this form of permanent reliance on one or several external donors would probably require a change in the governance structures of the hospital, for instance by including donor representatives on the board of the hospital.

5.2.3 Continued support from the RNE

The fact that the RNE supports the running of a single hospital in Tanzania is somehow an anomaly given the standard modalities of Norwegian development cooperation. Nevertheless, as has been documented in this review there are strong arguments for continuing the support:

- HLH is providing a broad range of highly valuable health services to a large population.
- HLH is operating as a flexible, adaptable and effective development agent in the area. HLH contributes to poverty alleviation through reduced vulnerability, empowerment of local communities and capacity building for future development. The HLH concept is well aligned with the objectives of Norwegian development assistance.
- HLH is operating in a part of the country which would probably have received little government attention anyway.
- The prospects for alternative funding if the RNE withdraws are highly uncertain. There is a high probability that a RNE withdrawal would lead to the end of the institution in its present form.

HLH in its present form has weak accountability systems in terms of accounting, financial information and health management information. This is largely the historical legacy of an organisation that has been run on trust and is an issue that the current management is committed to addressing. A precondition for continued support from the RNE should, however, be that acceptable accountability systems are put in place within a reasonable time frame. In order to underscore the importance of this point, we suggest making future assistance to HLH contingent on the implementation of these reforms. A realistic time plan for their implementation should be negotiated between HLH and the RNE. Indeed, tying assistance to the necessary development of information systems would help management navigate in the difficult waters of selling these changes to staff and implementing them.

While supporting a hospital is an anomaly in Norwegian development cooperation, it is quite common to support local NGOs. As this review has demonstrated, HLH is in many ways operating as a *de facto* local development NGO in a remote and vulnerable area of the country. The hospital is a cornerstone in this activity, as the hospital has been guided not by a narrow approach to health but rather by a holistic approach to human well-being. Development projects have grown out of this holistic perspective and have placed HLH in a unique position to respond to urgencies and to promote long-term, sustainable development projects.

One possibility for attracting continued support from the RNE might therefore be for HLH to strengthen its profile as a development agent. This would probably require the formulation of an overall strategy for the development work, including its scope and limitations as well as the role of the hospital both as development project itself and as an asset in other development projects. We do not, however, envisage any significant expansion in the scope of development activities at this point in time, but rather a consolidation around the activities where HLH has proven to have a comparative advantage, with the hospital as the core activity.

In addition to the achievements of HLH as a hospital and a development agent, there are also some new development policy reasons for continuing the RNE's support to HLH. Whereas Norway has not during recent years supported the health sector in Tanzania – except through the HLH grant – it has recently been decided to channel significant resources into the health basket fund. There is a real danger that this support will worsen the possibilities of sustaining voluntary agencies in the country and thus reduce health service provision in some of the poorest and most remote areas of the country. A direct involvement in HLH may in this situation be an important channel of information for the RNE in order to design its support in ways that do not cause unnecessary harm.

Related to a continuation of the support from the RNE, it would be natural to assess the present governance structure of the hospital in light of its size and its broad range of activities. The hospital has maintained its historical link directly under the ELCT's office for the administration of the Mbulu Diocese. It was handed over in 1963 to the local church, which has been the owner ever since. The hospital has been answerable to a Medical Board (now Hospital Board), which in turn has been answerable directly to the Bishop and the Executive Council of the diocese. While the review team does not question the ownership of the hospital, we do think it is necessary to question the ability of the local church adequately to maintain the level of professionalism needed in the future governance structures of the hospital. The present Hospital Board has taken steps to improve this situation, but the local church and church members are still an integral and dominant part of the governance structure. These members do not have the professional ability needed to assist the hospital in its international, national and local challenges.

A review of the governance structures should therefore be undertaken with the aim of increasing the level of professionalism and at the same time securing the interest of the church as an owner as well as the interests of the donors. One possible way ahead would be to consider the model created by the Kilimanjaro Christian Medical Center through its formation of the Good Samaritan Foundation. This large hospital is still owned by the ELCT but is governed by a separate trust.

Recommendations:

- Continue the support of HLH approximately at 2007 levels, adjusted for changes in prices and wages. It is difficult to come up with a reasonable time frame for the support, because the potential and the time needed for obtaining alternative sources of funding – either from the Government of Tanzania or from other external donors – are highly uncertain. There is, however, good reason to believe that HLH will need long-term support in order to maintain its activities
- Ask HLH to develop an action plan towards securing a more solid future funding base

- Make continued support to HLH dependent on the implementation of appropriate accountability measures
- Consider making continued support to HLH dependent on further reforms of its governance structure
- Prepare a timetable for implementing necessary reforms, preferably with the involvement of HLH staff. Allow sufficient time to implement the reforms in order not to overload the administration or destroy staff motivation
- Contribute to maintain the role of HLH as a development agent in the area, recognising the key role of the hospital in this regard

5.2.4 Internal measures to reduce the financial gap

This review has not been able to identify any significant change in the efficiency of the hospital over the last few years. This does not imply, however, that there is no potential for reducing the financial gap through internal cost-reducing or income-enhancing measures. We are not in a position to provide a systematic review of these potentials but confine ourselves to some incidental observations, some of which have been more fully discussed above:

- Revise patient fees (see above).
- Adopt a more hard-nosed business approach to the income-generating activities, including the farm. Establish profit centres for some of the heavy machinery (e.g. the Scania and the Caterpillar).
- Look into possibilities for reducing bad debts (failures to pay patient fees).

One elder suggested sending a letter to the secretary of the village where the person belongs to follow up and collect the debt. He said this would help greatly to reduce debts.

- Ensure full recovery from insured patients.

Some patients are on various insurance packages. Strict regulations apply to the recovery of these expenses – a slight mistake in the filling of forms and the money will not be repaid. Such mistakes were reported to be a common problem by the DMO in Hanang.

- Comply with regulations that make HLH eligible for support through the Joint Rehabilitation Fund.

The government supports the rehabilitation of health facilities through the Joint Rehabilitation Fund. The DMO in Hanang claimed that he will have resources to disburse to voluntary agencies through this fund, provided they fulfil certain government regulations. He claimed that voluntary agencies, including HLH, have not established health unit committees, which enable communities to assist in running the units, and that this implies that they do not qualify for this type of government support.

Appendix 1. Terms of Reference

1 Background

Haydom Lutheran Hospital (HLH) was established by the Norwegian Lutheran Mission in 1955. Since its beginning the hospital has had close contact with Norway both as a country and with Norad and the Royal Norwegian Embassy in Dar es Salaam (RNE). At present, the Norwegian support to HLH is administered through a Block Grant Contract between HLH and RNE. The Block Grant Contract states that there will be a mid-term review.

This review is to determine the effectiveness of the Program in a broad sense (including effects on the society outside the hospital) and give inputs to determine the way forward in the cooperation between HLH and RNE. It shall also focus on how HLH can continue its work and become more integrated into the Tanzanian health system.

The review is to be undertaken by a team of three persons, of which one is an auditor.

2 Purpose, context and intended use

The main objective for the Program is to enable HLH to continue its present activity and also become an even more integrated part of Tanzania's health system. This will take time as Tanzania will have to expand its health system both in terms of quality and quantity.

The objective for the review should be to assess the HLH both as a running hospital as well as a participant in the general development of the Mbulu District and to see how HLH can sustain the present level of activities. The study should look into and assess both the present financing system as well as new ones (if any) and give an assessment of the impact of the new wage policy now enforced by GOT will have on HLH both on financial and man-power situation.

As a part of this, the embassy wants to have a separate assessment of the financial steering system at HLH.

The review will be used as an input into the ongoing discussion on the size and the modality of the co-operation between the Royal Norwegian Embassy and HLH, more specified, in the mid-term revision of the running agreement between the parties.

3 Scope of work

The review will focus on three themes including but not restricted to:

- I HLH as a hospital. (Efficiency, cost-efficiency, sustainability)
 - HLHs place in the Tanzanian health system. Cooperation with / links to MoH.
 - Direct results as a hospital (efficiency, price/performance etc.)
 - External health program (Outreach Program) – effects
 - Sustainability / Future plans and possibilities.
- II HLHs as a development agent in the Mbulu District.
 - Impact in the district related to empowerment, local participation in development projects.
 - Impact on / participation in the development of other social improvements in Mbulu and neighbouring Districts (schools, water etc.).
- III Assessment of the financial management system (Auditor)
 - The quality of the financial management system (strengths / weaknesses, advice on improvements etc.)

- Possibilities for “leaks” with focus on 2004/5 and 2005/6.
- Anti-corruption and accountability measures.

4 Implementation of the review

The study shall be undertaken by Dr. Ottar Mæstad, CMI, Dr. Eamonn Brehoney, and Kailas K. Bhatbhat, Baker Tilly DGP & Co. The metrology for the study will be:

Desktop study of relevant documents

- Appropriation Document and Contract for the Block Grant
- Project Report and audited accounts from the running Program
- Other relevant documents

Field visit

to HLH including meetings with relevant officials. Other officials might also be interviewed if deemed necessary by the consultants.

The study will take 20 days, the audit 15 days, both including preparation, field trip, and finalization of the Reports. Full reports (Review report and Audit Report) will be delivered to RNE by September / October. 2007.

Appendix 2. Itineraries

Eamonn Brehony	
Date	Description
Mon Sept 17	Travel Dublin – Kilimanjaro
Tues Sept 18	Travel Arusha - Haydom Informal meeting with Dr Olsen
Wed Sept 19	Meeting management group and planning the itinerary Looking around hospital and meeting staff Compiling statistics Meeting head of nursing school
Thurs Sept 20	Travel to Mbulu Met District Commissioner Met CCM district secretary Met Secretary General ELCT, Mbulu Met assistant to the ELCT Bishop Met DMO
Fri Sept 21	Meeting senior management to plan activities Visiting nursery school in Haydom village Travel to Katesh Met DMO, Hanang Visited bridge built at Dang'eyda Visited RCHS outreach at Wandela Visited Gendabi health centre Passed through Mulbadaw farm and CMSC workshop
Sat Sept 22	Visited projects as follows: Food for Work – Harari – Yaeda Chini Dam, hand-dug well and primary school at Endagulda Meeting elder in Eskhesh Visited air strip, radio centre and health unit at Dumanga Meet Hadzabe elders at Dumanga Visited food for work projects at Yaeda chini
Sun Sept 23	Visiting and meeting principal of Dr Olsen Secondary School Visiting and meeting police Meeting accounts adviser and checking financial data Visiting cultural centre Meeting Dr Olsen
Mon Sept 24	Preparing presentation for management meeting and arranging meetings in Dar Cross-checking statistics given in finance and transport Meeting management team Travel to Arusha
Tues Sept 25	Travel to Dar es Salaam Meeting Mr Torgeirsbråten, RNE Meeting Dr Berege, Director Hospital Services, MoH Meeting Dr Mbatia, Director, Mental Health, MoH Discussions with Ottar Mæstad on continuation of the review

Ottar Mæstad	
Date	Description
Mon Sept 24	Travel Bergen – Arusha
Tues Sept 25	Travel to Dar es Salaam Meeting Mr Torgeirsbråten, RNE Meeting Dr Berege, Director, Hospital Services, MoH Meeting Dr Mbatia, Director, Mental Health, MoH Discussions with Eamonn Brehony on continuation of the review
Wed Sept 26	Travel Arusha – Haydom Meeting Dr Olsen
Thurs Sept 27	Looking around hospital and meeting staff Meeting management group and planning the itinerary Meeting Mr Masashi, Head of Admin and Human Resources Meeting Dr Olsen Visiting mobile RCHS clinic Group discussion with doctors Group discussion with clinical officers Meeting Dr Malleyeck
Fri Sept 28	Meeting Dr Olsen Group discussion with nurses Group discussion with medical attendants Group discussion with technical personnel Meeting with trade union Meeting Mr and Mrs Savage
Sat Sept 29	Meeting finance department Compiling and cross-checking financial statistics Compiling and cross-checking human resource statistics Quality check of OPD records (OPD and statistics departments) Meeting and reporting to management group Meeting Dr Olsen
Sun Sept 30	Travel Haydom - Yeeda Chini Visiting Dr Olsen Secondary School Visiting the girls' hostel Visiting the police station Visiting road and dam constructed on food for work basis Visiting water pump Visiting primary school constructed by HLH Informal meeting Anna Kari Evjen Olsen Travel Haydom – Arusha

Appendix 3: Persons and groups consulted

Dr Ø. E. Olsen	Managing Medical Director
Dr I. Malleyeck	Assistant Medical Director
Samwell Mshashi	Head of Admin and Human Resources
Ulumbi Lyanga	Principal of Haydom Nursing School
Chad Grimm	Adviser to finance department, HLH
Victor Musa	Deputy chairman, HLH trade union

The management team as a group
 All department heads
 Doctors at HLH (group discussion)
 Clinical officers at HLH (group discussion)
 Nurses at HLH (group discussion)
 Medical attendants at HLH (group discussion)
 Technical medical staff at HLH (group discussion)

Mr and Mrs Savage	HLH ex-pat staff
Thomas Tippe	Clinical Officer, Gendabi
A. K. E. Olsen	Consultant HLH
E. Goroi	District Commissioner, Mbulu District
Dr John W. Gurisha	District Medical Officer, Mbulu district
Dodo Duguli Sambu Ladi Douglas	District Party Secretary, CCM, Mbulu
N. Nsanganzelu	Assistant to the ELCT Bishop of Mbulu
L. Rohho	Secretary General, ELCT, Diocese of Mbulu
Dr Kyambile	District Medical Officer, Hanang district

Raphael Sighis
 Timoth Apolonari
 Mama Sanka and staff at nursery school, Haydom village
 Group of 11 women at Wandela RCHS outreach programme
 Group of five women, beneficiaries of RCHS programme, Dumanga
 Mahia Maturu and three Hadzabe elders, Dumanga
 Nananagi Gisegasa, elder, Eskhesh

Dr Berege	Director of Hospital Services, MoH, Dar es Salaam
Dr Mbatia	Director of Mental Health Services, MoH, Dar es Salaam
Mr S. Torgeirsbråten	RNE, Dar es Salaam

Appendix 4. Key activities carried out at HLH

Hospital services

- Medical ward
- General ward (Surgical 1 and 2)
- Maternity ward
- Tuberculosis ward
- Paediatric ward
- Physiotherapy
- Eye Department
- Outpatient Department
- X-ray department including a CT scan
- Operating theatres – three major and three minor
- Intravenous unit
- Dental clinic
- Drug store

Other medical support services:

- Mental Health Clinic, including epilepsy clinic and a recently initiated service addressing drug and alcohol abuse
- Ambulance and radio service
- Pastoral service

Outreach and preventive health services:

- Reproductive Child Health Service, with 1 static station and 27 outstations, of which 6 are served by plane
- HIV/AIDS prevention, treatment and care

Decentralised curative units operated by HLH:

- Kansay Lutheran Health Centre
- Balandalalu Lutheran Health Centre
- Gendabi Lutheran Health Centre
- Suger Dispensary
- Harbanghet Dispensary

Other support units at HLH:

- Finance Department
- Workshop – construction and maintenance, hospital transport services
- Laundry
- Library, with internet access
- Tailoring department
- A vegetable garden and dairy cows

Appendix 5. Income and expenditure

	2004		2005		2006		2007	
	1,000 Tsh	Share						
Incomes								
Patient fees	315 442	18 %	406 314	15 %	385 092	11 %	400 197	11 %
RNE grant	869 438	48 %	1 599 790	60 %	2 000 000	59 %	2 400 000	64 %
Govt grants	229 195	13 %	299 648	11 %	290 872	9 %	408 979	11 %
Gifts	70 456	4 %	66 611	2 %	110 656	3 %	266 501	7 %
HLH facilities and equipment	314 047	17 %	310 912	12 %	502 289	15 %	268 911	7 %
Other income	3 290	0 %	3 199	0 %	86 141	3 %	7 583	0 %
Total income	1 801 868	100 %	2 686 474	100 %	3 375 050	100 %	3 752 171	100 %
Expenditures								
Med supplies	352 137	20 %	494 743	20 %	671 970	20 %	742 066	18 %
Operating expenses	513 745	30 %	666 975	27 %	770 164	23 %	927 144	22 %
HIV/AIDS work	-	0 %	-	0 %	92 736	3 %	250 000	6 %
Staff costs	848 672	49 %	1 251 505	51 %	1 801 734	53 %	2 207 569	53 %
Nursing School	19 523	1 %	28 861	1 %	43 762	1 %	20 833	1 %
Total expenditure	1 734 077	100 %	2 442 084	100 %	3 380 366	100 %	4 147 612	100 %

Sources: Audited financial reports 2004-2006; revised budget August 2007.

Appendix 6: Concepts and definitions⁷

The Standard Unit of Output

While hospitals produce a wide range of services, it is impossible to capture all these services and attach a cost to each of them. This would require a fairly sophisticated accounting system that is not available at the moment in most institutions. The middle ground can be reached by identifying the most common and comprehensive final outputs of a hospital and attribute to them a relative weight based on cost analysis already carried out. The index that is used by the Ugandan Catholic Medical Bureau is called the standard unit of output (SUO). SUO is a composite index that takes into account various types of output. It provides a general idea of the volumes of the main services produced by a health unit. The choice of the parameters to be used in the calculation of the index is determined by the information routinely generated by the HMIS:

- Inpatient episodes (IP),
- Outpatient contacts (OP),
- Deliveries,
- Immunisation doses administered,
- Antenatal - Mother and Child Health – Family Planning contacts.

A single index is derived starting from the costs of the following activities relative to the costs of one outpatient contact (OP):

Cost for 1 IP	= 15 times the cost of 1 OP
Cost for 1 delivery	= 5 times the cost of 1 OP
Cost for 1 AN contact	= ½ the cost of 1 OP
Cost of 1 immunisation dose	= 1/5 the cost of 1 OP

All the 5 categories can now be expressed in one index of the volume of activities, the Standard Unit of Output (SUO) index:

$$SUO = 15*IP + 1*OP + 5*Del + 0.2*Imm + 0.5*AN/MCH/FP$$

The relative weights of each of these activities were drawn partly from the literature and partly from a cost analysis exercise carried out by one of the authors (Giusti, 1993). A critical analysis of the effects of the biases introduced by the choice of relative weights has so far demonstrated that the formula developed can comfortably be used to compare the majority of hospitals, according to UCMB (Beekes, 2003).

Average cost per SUO

This is a measure of efficiency. It represents the average amount of money spent by the hospital to produce a unit of output (assumed to be an OPD contact). It is calculated as the total costs of the hospital divided by the total number of SUOs produced.

Staff productivity (SUO per staff)

This is a measure of efficiency. It can be calculated both for qualified staff as well as for all hospital staff. It is the total SUOs produced by a given hospital in a year divided by the number of staff (all or qualified) in the hospital that year.

Average Fee per SUO

⁷ This appendix draws heavily on work done by the Ugandan Catholic Medical Bureau and kindly shared with Eamonn Brehony. We acknowledge their help and kindness in allowing us to use this approach.

This is a measure of accessibility. It represents the average amount of money spent by a patient to get a unit of output (assumed to be an OPD contact). It is calculated as the total amount of money collected from user fees divided by the total number of SUOs produced by the hospital.

Average Length of Stay (ALOS)

This is the average number of days that each inpatient stays in the hospital. It is total inpatient days divided by total number of admissions. It may vary for different reasons, e.g. case mix and quality of services. There is no evidence that longer stays contribute to higher quality care. Without case mix and disease severity data, it is difficult to use ALOS as a direct efficiency measure. But ALOS that are longer for hospitals of the same level and same case mix may suggest inefficiency.

Bed Occupancy Rate (BOR)

This is the proportion of the potential patient bed days of a hospital utilised in a particular period, usually a year. It is expressed as a percentage. It is total inpatient days divided by total number of beds multiplied by 365 days. The BOR provides information about the degree of capacity utilisation of inpatient services. A BOR between 80-90% is usually considered to be a reasonable norm.

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SUMMARY

This report reviews the performance of Haydom Lutheran Hospital (HLH), Tanzania. Focus is on HLH's output and effectiveness as a hospital, HLH's place in the Tanzanian health system, and on the role of HLH as a development agent. The report also discusses alternatives for sustained funding of the activities at HLH.

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