

# Strategic plan 2015-2019

## Haydom Lutheran Hospital

---

27 February 2015



## Executive Summary

This document formulates the plans and strategies that we want to pursue in order to make the next 5-year period a period of continued growth and success for our hospital. This document has come about by first of all consulting our various hospital departmental staff and subsequently holding a series of strategic sessions between hospital management and key staff members from different hospital areas. We want to thank all the staff for participating in this process with their ideas and their time.

The purpose of this document is to clearly state the strategic plans of our hospital for the next 5 years. For this we have focused first on major issues and plans central to the hospital as a whole, and subsequently “drilled down” to the consequences and individual strategies per department. In order to make this document a useful guiding tool over the next five years, we have defined the goals and accomplishments according to the SMART criteria – their formulation is Specific, the results Measurable, Acceptable and Realistic and they are Time-bound.

During the process of defining strategy for the next five years, we found that we were continuously trying to find a balance between ambition and realism. Being overly ambitious leads to unrealistic plans, whereas too little ambition would lead to plans that are easily achievable but less progress would be booked than what is possible in a successful 5-year period. We believe the strategies presented here represent a good balance in this regard.

Haydom Lutheran Hospital is a leading hospital in Tanzania in many ways. Despite its rural location, successes are achieved that even large urban hospitals frequently find difficult to match. Our hospital is renowned for the high quality of its medical services and we are determined to continue to build forward on this important base of success. For that reason, we present our 5-year strategy with the overarching theme “Leading the way”.

“Leading the way” of course includes finding successful ways of creating long-term sustainability. But it also implies executing a strategy that increasingly attracts qualified medical and administrative staff to Haydom and manages to motivate and retain them. We believe this implies a continuation of the policies and strategies that have been developed over the past, and combining these into a concerted strategy that builds on the many successes of Haydom and forges an institute that will increasingly be recognised internationally as a leading example of how to successfully exist as a large hospital in a rural low-resource setting.

The strategy of leading the way builds on three main pillars. The three pillars need a strong foundation. The foundation consists of professional and effective hospital administration as well as increasing sustainability. Because of the importance of this foundation, the first chapter of this strategic plan focuses entirely on further strengthening of our administration and on achieving increasing sustainability. In considering the challenges of achieving increased financial sustainability and reduced single donor dependency, two risks that deserve careful consideration are (1) over-reliance on Tanzanian government whilst the political reality of national politics makes this source inherently unpredictable and (2) the risk of excluding the more disadvantaged population from health care services through increasing prices too quickly or to a too high level.

We believe financial stability can only be realistically achieved if it goes hand in hand with good clinical quality. Without high quality of clinical services, the reason for existence of our hospital would become questionable. Thanks to the large level of investment in human capital and resources our hospital is renowned for the high quality of its medical services, but we believe we can improve further. This strategic plan identifies some realistic and achievable strategies that will help in the further improvement of our clinical services.

On top of the foundation stand three pillars. The first pillar represents the hospital's clinical services. The clinical services remain the most important area to achieve top results in order to ensure good healthcare outcomes for our population. This is achieved with an increasing number of doctors and specialists as well as by increasing the number of specialist clinics. We believe that without good primary services it will be difficult to deliver high quality healthcare. This starts with basic requirements such as good history taking and clinical examinations during the admission phase as well as excellent nursing care throughout the patients stay.

The second pillar is training. Our hospital is developing itself as a training institution and will continue this strategy into the future. By augmenting the nursing school and the medical intern training program with programs such as a clinical officer school, a school for laboratory technicians and a school for nurse anaesthetists, Haydom will attain the status of teaching hospital. This has at least two positive effects. First of all, capable staff may be increasingly attracted by the benefit that work at Haydom not only entails clinical work but also teaching. Secondly, from the pool of graduating students promising young talent may be recruited to join the hospital workforce, thus overcoming national shortages of skilled medical personnel.

The third pillar is research. Clinical research is important to obtain insight how our clinical services can be improved further. Since 2008, a research centre has been developing in Haydom that a hospital in any setting could be proud of. A number of highly relevant international studies take place, backed by important international partners and having the potential to lead to life-changing results for huge numbers of people at a global level. We believe that integrating the research centre into the hospital's strategy creates a strong synergy with the other two pillars of clinical work and training, providing further motivation for the most talented medical professionals to work in Haydom, enhancing career opportunities and opening up roads to international research for our staff.

The new institution that is embodied by these three areas of activity will be a leading institution built on the proud tradition of Haydom Lutheran Hospital.

Why do we choose this strategy of growth at a time when resources appear to become increasingly limited? Because we believe that in order to survive as a successful institute, we have to continue to build on the exceptionally strong foundation laid by the hard work and investments of 60 years past. It's about remaining successful. Consolidation and lack of growth would lead to stagnation, whilst further growth creates increased dynamic and will help to attract and retain staff and keep our stakeholders engaged with and enthusiastic about "the anachronism" called Haydom. This is our path towards leading the way.

## Contents

Executive Summary .....	2
<b>Foundation .....</b>	<b>5</b>
Quality of clinical services.....	5
Financial Sustainability .....	7
Successful management of human resources, finance and internal control.....	10
<i>Management of Human Resources</i> .....	11
<i>Financial management</i> .....	11
<i>Internal controls</i> .....	12
<b>Pillar 1: Clinical services.....</b>	<b>13</b>
Haydom Lutheran Health Center (primary health care) .....	13
<i>General outpatient department</i> .....	14
<i>Reproductive &amp; Child Healthcare Services</i> .....	14
<i>Health centres</i> .....	17
Referral hospital at the Regional Level .....	19
<i>Specialised Clinical Services</i> .....	20
<i>Physical rehabilitation (physiotherapy, occupational and orthotics)</i> .....	27
<i>Mental health</i> .....	28
<i>Eye department</i> .....	28
<i>Diagnostic services</i> .....	28
<i>Supportive services</i> .....	30
<b>Pillar 2: Training institute .....</b>	<b>35</b>
<b>Pillar 3: Research .....</b>	<b>36</b>
Academic research.....	36
Hospital based health services research (operational research) .....	36
International research .....	37
<b>Non-medical services.....</b>	<b>39</b>
<i>Farmland</i> .....	39
<i>Garage</i> .....	40
<i>Guesthouse</i> .....	41
<b>Appendix 1: HLH Monitoring and Evaluation Framework.....</b>	<b>42</b>

## Foundation

We identified several themes that are elementary to running a good hospital. We have collected these themes in the first chapter, which we call “foundational”. Foundational, because as long as these areas are in order, we have a rock-solid foundation on which to build the further improvement and growth of our hospital. The three main themes that belong to a strong foundation are quality of clinical service, financial sustainability and successful administration of human resources, finance and internal control.

## Quality of clinical services

We believe that achieving the highest possible quality of clinical services is key to a sustainable future of our hospital. In fact, we believe this is of even greater importance than achieving financial sustainability. This is because by achieving the highest possible quality of clinical services, our hospital will continue to have irrefutable added value to the surrounding community, and will continue to be looked upon by our current and future donors as a worthy recipient of further funding. Furthermore, our hospital will continue to gain reputation as one of the best hospitals of Tanzania, which provides strong arguments to the government why the hospital deserves more government support. Outstanding quality of clinical services will also attract more and more patients willing to pay for these services, which can help improve revenue internally.

Since the beginning and thanks to the large support that our hospital has enjoyed both in terms of expertise and funding, HLH has stood out from most other hospitals in terms of quality of clinical services. Over the past 5 years the hospital has continued to take steps towards increasing the quality further, especially by increasing the number of qualified medical staff. We believe we now have in place all the important preconditions necessary to deliver top-quality healthcare.

For the next 5 years, we believe the focus should therefore shift to increasing the quality of service that is delivered by the team of medical personnel that is in place. This is not to say that the quality of their services are unsatisfactory (indeed, they are better than most hospitals in Tanzania), but we believe that with the right approach, the quality can increase further in the next 5 year period.

In order to achieve real improvement in clinical outcome, we aim to define SMART goals for the clinical results which we really believe can be achieved in the next 5 years, with a strong focus on the “R” for Realism. Defining realistic and attainable plans are a necessary first step towards achieving real change. The second step is of course to actually carry out the plans that are made. We believe we have in place an administrative team that is capable and motivated to carry out these plans and achieve real improvement of our institution.

Medical statistics play an essential role in measuring improvements in clinical outcome.

One of the central challenges to achieving sustainable high quality of clinical services is the recruitment and retaining of qualified medical staff. This is challenging anywhere in Tanzania because qualified and motivated medical personnel is scarce, but is especially challenging for Haydom, which – unlike most other large hospitals - lacks a neighbouring large urban centre that can provide access to a highly

educated workforce. The Haydom area also has less to offer highly educated workers in terms of infrastructure and lifestyle. For that reason, Haydom has had to rely to a large degree on training staff originating from Haydom and its surroundings. Experience shows that staff born in the area surrounding Haydom and sponsored by our hospital to achieve further education remain loyal, even when they could easily find a job in one of the major cities of Tanzania or abroad. In order to build up the quality of our staff further and motivate them to work for and stay in Haydom, we have defined the below strategy.

Highly-qualified and motivated staff can be attracted and retained by making our hospital be an attractive employer. We believe the most important factors that can make our hospital be perceived as an attractive employer are:

1. Providing opportunities for advancement of staff
  - a. Capacity building (on-job training, refresher courses and scholarships)
  - b. Internal career advancement opportunities
2. Providing a good working environment, which enables the staff to perform their duties. This means whatever is needed for the staff's job to be carried out effectively (which might mean the right equipment and supplies, well-working computer-based patient administration (Care2x), sufficient working space, enough colleagues in the team, effective communication channels).
3. Involvement of all staff in organisational decision making processes and strategic planning (5 year plan, annual work plan, etc.). This includes an open and transparent management style in the central administration so that no-one feels left out or unheard.
4. Clear roles for each member of staff and entrustment of responsibilities within the whole staff function.
5. Financial motivation. When there are financial opportunities or challenges, we believe it is a must to involve the workers through the main trade union (TUGHE) in the decision making process. Such inclusion will create more satisfaction amongst staff about the final decisions that impact their monthly income.

Together with ensuring that these five factors are as good as possible, we believe that certain administrative mechanisms can also help to monitor and evaluate staff performance and reward good performance. One important aspect in this is having good daily, weekly, monthly, quarterly and annual monitoring and evaluation of organisation functioning at every level. The other important aspect is to have a well-functioning staff performance and appraisal system in place. Having these two aspects in place will allow competent and motivated staff to be identified and rewarded.

Generally, our hospital is performing quite well in the factors identified above. However, challenges that remain are instituting the staff performance appraisal system and monitoring and evaluation mechanisms. We aim to achieve this within 2015 so that we can reap the benefits of this strategy for the remaining four years of the next 5-year period.

Finally, as part of monitoring and evaluation, we will strengthen the Quality Improvement Team (QIT), which has the responsibility to monitor and evaluate quality of clinical services of our hospital. By the end of this 5-year period, the goal is that the QIT finds that 99% of clinical histories are taken correctly, starting with a baseline survey in 2015.

### *Side-note: new hospital building plans*

During the development of the current 5-year strategic plans we frequently arrived at the conclusion that it could be very beneficial for the further improvement of our hospital to build a new hospital building, rather than trying to make the current set of buildings accommodate all the plans and improvements. Some of the current buildings are outdated and beginning to deteriorate whilst others are too small for the growing needs of modern healthcare provision. For that reason, we have arrived at the conclusion that a new hospital building should be an explicit goal to be worked towards over the next 5 years.

A blueprint of a new hospital building has already been drawn-up by an experienced architect. However, we are aware that the construction of a new hospital building will take time and first of all require sufficient funds to be found for the project to be successfully achieved. Realistically, we expect that approximately 2 years will be needed to raise enough funds to start construction, and a further 3 years will be needed to realize the plans in full. This means that within the current 5-year period, the new hospital building will not be utilizable.

For the above reasons, we have defined as a parallel strategy to pursuing the strategies outlined in this 5-year plan, to work towards the realization of a new hospital building, whilst for the next 5 years we will work with the existing infrastructure, making modifications or additions only where absolutely necessary. This is a realistic strategy that makes use of the resources that we currently have, whilst at the same time aiming towards large improvements, the fruits of which shall be reaped in the years after the coming 5-year period.

For some of the strategies below, we make brief reference to the new hospital building plan as “optimal strategy” but subsequently work out a secondary strategy that does not rely on the realization of a new building. With this approach, we avoid stagnation during the process of constructing a new building, since the improvement plans of the hospital should not need to be placed “on hold” whilst a new building is constructed.

## **Financial Sustainability**

Almost by definition, a hospital that aims to provide a service to its surrounding community is not sustainable internally. In most Western countries, hospitals are financed to a large extent by their government. HLH has its roots in Norwegian missionary work and relies for a significant portion of its total hospital expenditure on continued support from the Norwegian government.

Five years ago in the 55 year jubilee celebration document, an important observation concerning sustainability was noted: The sustainability factor, both in terms of finances, human resources, equipment and values, involved in the long term provision of services to these constituencies is the ability of the hospital to be relevant to the stakeholders that are able and willing to support these efforts.

For the purposes of this strategic plan, it is helpful to define several levels of sustainability:



- Level 1: Donor-based sustainability: the ability to sustain operations based on own revenue supplemented by government support and donor support. For real sustainability at this level, over-reliance on a single donor should also be avoided, to ensure that losing a specific donor does not endanger sustainability of operations.
- Level 2: Public sustainability: the ability to sustain operations based on own revenue supplemented by government support. This is the level of sustainability typically achieved by public hospitals in most Western countries.
- Level 3: Self-sustainability: the ability to sustain operations based entirely on own revenue (e.g. patient fees). Any normal commercial operation should be expected to be self-sustainable but a large public hospital typically is not expected to achieve this level of sustainability.

According to this definition, HLH currently operates at sustainability level 1, being largely donor-based. However, there is currently over-reliance on a single donor, which means that real sustainability at this level is not yet achieved. For that reason we define both a short-term (within the horizon of this 5 year strategic plan) and long term goal (which can take considerably more than the 5 years that are within the horizon of this strategic plan):

**Short-term goal:** multi-donor strategy to achieve level-1 sustainability, i.e. by reducing single donor dependence.

**Long-term goal:** to achieve level-2 sustainability, i.e. to be dependent only on Tanzanian government for the required supplementation of revenues to cover hospital expenditures.

For both goals, the first and foremost point of the foundational strategy needs to be emphasized. We believe that quality of clinical services are vital to achieving sustainability of a hospital at both level 1 and level 2.

For the short term goal of achieving level-1 sustainability, HLH continues to rely on Norwegian government support to cover the gap that remains between income and expenditure, but all efforts are made to reduce the size of this gap as far as possible. The main strategies are:

1. Continue to lobby the Tanzanian government at all government levels for increased support
2. Slow down expenditure growth as much as possible and reduce costs wherever possible
3. Continue efforts to increase own hospital income
4. Attempt to raise fundraising income.

### ***1. Tanzanian government support***

Already for 2 years, our hospital has been a key player in the CSSC forum, representing faith based hospitals in Tanzania, to come to an agreement with the Tanzanian government for increasing support in terms of human resources, funding, supplies and further development. In fact, the first draft was based on the MoU developed by HLH.

The MoU has advanced through the Ministry of Health and Social Welfare as well as the Ministry of Establishment and is currently at the Ministry of Finance, where the financial impact is being assessed.



We will continue to closely follow-up the process of this MoU to be implemented, through the CSSC forum, and at the same time lobby the central government to push for the MoU to be signed.

Besides efforts focused on the MoU, we will continue to lobby government at the local and central level. This has been an effective strategy for the past year, during which time we have seen the number of qualified staff supported by government (permanent employment and grants) increase to a total of 143 (February 2015) which is a 70% increase compared to last year. We aim to continue this positive trend.

## ***2. Prudent management of expenditure***

Bottom-up budgeting versus historic or top-down budgeting. We introduced this mode of budgeting for the 2015 budget with the pharmacy and laboratory areas in the budget. For 2016 we aim to have a complete bottom-up budget where each department carries responsibility for their section of the budget.

Increased budget versus actual realisation monitoring. For this, we have implemented from 2015 onwards that the Head of Finance analyses budget variance on a monthly basis and reports unexpected variance to management. Furthermore, a quarterly budget variance analysis takes place with all of management.

## ***3. Own hospital income***

The efforts to increase own hospital income can be further defined as:

- a. Increasing patient income without jeopardizing accessibility of healthcare to more disadvantaged households.
- b. Increasing non-patient income, primarily from expansion of guesthouse project.

Increasing patient income without jeopardizing accessibility of healthcare to more disadvantaged households can be achieved by introducing more specialist services that were previously unavailable, introducing Care2x for patient billing (which has in other hospitals lead to larger income through increased transparency of billing), strengthening internal controls (which prevents mistakes and fraud), regularly reviewing prices (including the possibility of lowering prices if we find the prices have an unacceptable exclusionary effect) and the introduction of private rooms or ward (same quality of healthcare but more luxurious room for which the insured or wealthier patient can pay a premium).

Increasing non-patient income refers to income from projects, primarily the garage, farms and guesthouse. We refer to the last chapter, which deals with our non-medical services, for strategic plans of these projects.

## ***4. Fundraising income***

For this a fundraising strategy has been developed for 2014. Three fundraising segments are identified, the public and large corporate segment, the smaller corporate segment and the private segment. The strategy targets each of these segments separately. The strategy has been implemented with moderate success in 2014 and can continue to be implemented for the next 5 years.

In brief, the strategy first of all aims at continuous improvement of the hospital image to the outside world through using all media strategically (website, social media, newsletter, public relations events). This is complemented by the aim to make all visitors to our hospital feel welcome and see the success and accomplishment of our hospital, so as to continuously grow our network of ambassadors in the whole world.

Secondly, the strategy identifies three segments that are targeted separately, the large public segment, the corporate segment and the private segment. In the first segment, large public, opportunities are sought to engage new large public donors for funding projects at our hospital that are aligned with the goals of the partner. The chance of success in this segment is small but the benefit would be large, so if opportunities are identified this is pursued. In the second segment, the strategy aims to attract corporate partners to get involved in our hospital. This type of involvement can be both through material support and through in-kind support, e.g. capacity building or consultancy services. In the third segment, we target individuals. Even though contributions from individuals can generally be lower than from corporate or public partners, our hospital has a large network worldwide and an especially good reputation in important Norwegian communities. We also welcome hundreds of foreign visitors yearly, many of whom can be encouraged to contribute to the cause of our hospital. The law of large number makes this third segment an important target for the fundraising strategy.

In combination with the above three-pronged strategy, another important part of fundraising strategy is to clearly define (and keep up to date) a list of most important needs of the hospital. This creates focus for potential donors. Examples can be: upgrading the premature baby room, modernizing the central laundry facility of the hospital, acquiring an important medical machine, constructing a new incinerator, etc. By keeping such a list on the website and also showing which projects are accomplished successfully, this can serve to engage and mobilize our network of support effectively.

### **Successful management of human resources, finance and internal control**

We believe that the only way to achieve real success and growth of our hospital, is by ensuring that the central administration functions in such a way that it facilitates and promotes growth of talent of hospital staff. In this section of our strategic plan, we focus our thoughts on how to effectively create the conditions necessary to achieve this. The strategy in this section focuses on three areas, with the first and foremost area being the management of human resources, secondly financial administration needs to be of a high standard and thirdly there should be strong internal controls. We go into more detail for each of these three areas below.

As an overall improvement that we want to implement from the very start of the coming 5-year period, we want to create and use an almanac. Without operating with an almanac, there is a constant risk of losing sight of important priorities and resorting to a haphazard style of management. A good almanac helps the administration to focus on the right priorities at the right moment in time, which can be an enabling factor in achieving the planned goals and leading to success.

## Management of Human Resources

We define successful management of human resources as resulting in talented staff being attracted, recruited, retained and rewarded. Simultaneously, underperforming staff should be identifiable and action taken to stimulate such staff to improve, or – if unsuccessful – to eventually leave. In order to achieve this, we have identified the following necessary achievements.

Result	When
A clear organogram is in place and adhered to for the entire organisation	2015
A “Manning plan” in accordance with government guidelines for referral hospital staffing levels is in place and adhered to for the entire organisation. The Manning Plan is the driver for the salary budget line and recruitment takes place only according to the Manning Plan.	2015
The HR department enables the organisation to carry out yearly performance appraisal cycles (OPRAS).	2015
A set of motivational programs is in place (formalised in the HR manual) that rewards good employees. This includes promotions and demotions in line with employee appraisal, “Employee of the month / year” awards, 25 year service gratification and retirement gratification.	2015
All staff has easy access to and is aware of relevant policies and guidelines. For this goal, we aim to increasingly use computer-based communications (intranet).	2015
Our personnel database is computerised and continuously kept up-to-date.	2016
The HR database is linked to the Payroll.	2016
A set of capacity building programs for staff is in place and clearly documented in policy. This includes on-job training programs, short courses and seminars, and long-term courses. A career-development policy is in place that offers a variety of measures that stimulate further education of staff which are full scholarships (hospital pays for schooling of employee, used for the most urgent needs), salary-based scholarships (hospital does not pay for schooling but continues to pay salary), job-guarantee upon completion (hospital does not continue to pay salary but will re-employ after completion of further schooling).	2016

## Financial management

One of the core requirements of success for our hospital is the continuation and further improvement of the financial management. Our hospital has enjoyed 5 very constructive years in terms of financial management and the results are showing clearly. The financial administration team is professional and highly motivated and we continue to build capacity in this function. We believe that having a strong team in place taking care of financial administration has several important effects. First of all, it facilitates transparent reporting to our partners, which builds trust. Secondly, it facilitates the administration to be aware and up-to-date of financial performance and therefore be able to steer the

hospital effectively. Third of all, effective financial management at departmental level will make the organization as a whole increasingly cost-conscious.

In order to achieve continued success and further improvement of financial management, we have identified four key areas that deserve focus:

Result	When
Patient billing (well-functioning computer-based patient administration which generates the billing, which should in turn be linked to the financial administration)	2015
Asset management (fixed asset register, labelling of all fixed assets, periodic updating of the register, stock taking through perpetual inventory counts and yearly comprehensive inventory counts)	2015
Strong internal controls - More on internal controls in the next paragraph	2015
Budget process becomes a bottom-up process where each department carries own responsibility for their own section of the budget. This increases transparency and accountability and the role of the central financial administration becomes more facilitating to the various departments	2016

### Internal controls

Complementary to effective financial management, strong internal controls will help our hospital achieve further success. In 2014 the Internal Control department was formally established and has started implementing controls of the various routines and procedures of our hospital. Internal controls focus on the quality of financial processes (not to be confused with quality of medical services, for which the Quality Improvement Team is in place). Effective internal controls not only catch mistakes or fraud at an early stage but also help gain insight into how internal processes can be improved.

For the internal control department to be effective, in 2014 we have implemented a formal internal control manual as well as several important policies addressing areas related to staff integrity. For the internal control department to be effective and grow during the next five years, we identify the following achievements:

Result	When
Internal control has a clear position within the hospital organogram	2015
Clear policies, manuals and guidelines in place	2015
Empowering the internal control department with training	2015
Quarterly reporting to management and annual reports to the board	2015
Added manpower to further strengthen the internal control department	2017

## **Pillar 1: Clinical services**

Based on the foundation laid by the strategy described in the previous chapter, we identified three main pillars. This chapter deals with the first pillar, consisting of the clinical services with which we mean the hospital function. We differentiate between two separate functions: the primary healthcare function and the referral level specialist clinical services. We deal with each of these two functions separately below.

### **Haydom Lutheran Health Center (primary health care)**

When the hospital opened in 1955, it started as a primary health care service. As the hospital and community grew over time, the needs for healthcare increased so the hospital grew gradually until today we have reached the status of regional level referral hospital. Nevertheless, through most of the past 60 years no other institute has started in the community to provide primary health care, so the primary healthcare function of our hospital has remained of undiminished importance throughout the development of the hospital and its surroundings.

The Tanzanian government has been supporting our hospital to deliver primary healthcare functions through the basket funds (Mbulu district), staff grants, medicine grants and (theoretically) bed-grants (in practice, the bed-grant has not been paid for many years and is a fairly small amount). Furthermore, the government has set up health centres and dispensaries in certain areas, which duplicate the outreach program function of our hospital in those areas.

The high level plan for the future is to continue offering primary health care services where the need remains, but wherever this function is duplicated by another institution (primarily by the government), the hospital's primary health-care services can be phased-out.

Our long-term vision is to phase-out completely from the primary healthcare function. However, this relies on an alternative provider (most likely to be the Tanzanian government) to set-up a credible alternative. In this long-term strategy we try to avoid duplication of services but where there is no duplication, we want to continue to offer the high quality of primary healthcare that our community has enjoyed since the beginnings of our hospital. The reason for this is that we believe the impact to health-outcome of good primary services is very large, so we believe we should continue to ensure the availability of these services as long as it lies within our means to do so.

Our strategy for the next 5 years is to make the administration of the primary health-care functions such, that it is not intertwined with the regional referral level function of our hospital. This has the advantage that we will be able to clearly account for the costs of providing primary healthcare, which will aid in discussions with Tanzanian government and existing and potential donors to clearly show what our hospital is doing in terms of primary healthcare and outreach services for the catchment area surrounding our hospital. The primary healthcare services including outreach that are carried out by HLH will, for ease of reference, be referred to as "Haydom Lutheran Health Center" although for the next 5 years we do not plan to establish a separate entity, we only plan for administrative separation.

By pursuing this strategy, we are anticipating on three possible scenarios.

- 1) Both primary and referral function continue to be owned and run by the ELCT Mbulu Diocese. In this scenario, administrative separation is beneficial because it will allow for clearer dialogue with support partners such as Tanzanian government and donor institutions, providing clarity about which function is being supported and what the true costs of that function is.
- 2) The primary healthcare function engages in a PPP with Tanzanian government District level. In this scenario, it is beneficial that the primary function has been administratively separated from the specialist function because the PPP agreement at District level will apply only to the primary function.
- 3) The primary healthcare function can be phased-out due to establishment of another health centre (e.g. by government) close to or in Haydom. In this scenario, it is beneficial that the primary function has been administratively separated from the specialist function because this will allow the phasing-out to be carried out more effectively without influencing the specialist function of our hospital.

The primary healthcare function of our hospital consists of the general outpatient department (OPD), The Reproductive & Child Healthcare Services (RCHS) which includes a large outreach program, and several health centres (satellites to our hospital) also including some outreach activities. We discuss each of these parts of the primary healthcare function below.

### **General outpatient department**

The general OPD opens its doors to non-referred patients with primary healthcare needs. These patients are attended, treated and in some cases they are referred to the specialist function of our hospital. In recent years the OPD has seen close to thirty thousand patients per year.

For as long as the services of our general OPD have not been duplicated in the region, these services remain essential to the surrounding communities and we believe they have an important impact to health-outcome in the region. For that reason, for the next 5 years and longer term, our general OPD will continue to provide the normal primary healthcare functions until such time that these services become duplicated fully by other providers. We will engage the government in discussions concerning private-public-partnership to encourage more government involvement in this function.

### **Reproductive & Child Healthcare Services**

The RCHS consists of what we refer to as the “station”, located within the hospital grounds as well as 27 outreach clinics located in remote to very remote areas.

The primary activities carried out in the RCHS are the screening of pregnant women (antenatal care) and children (monitoring growth and development) up to 5 years old, as well as providing vaccinations to both pregnant women and children and providing family planning counselling. Furthermore, at our RCHS station we also carry out ultrasounds and take blood tests (Haemoglobin and HIV-screening).

The 27 outreach clinics carried out from our hospital consist of 20 clinics reached by car and 7 reached by plane. These are:



## Health facilities in reference area of Haydom Lutheran Hospital





- Car RCH clinics: Endamilay, Endagulda, Muslur, Murguchida, Geson, Labay, Gosamwan, Shagwergwet, Getanyamba, Endaharghadat, Gurawe, Garawja, Dangeyda, Gagkata, Wan Endamudayga and Dajameda, Orbesh and Luxumanga, Endamanang.
- Flight RCH clinics: Bugar, Harbanghed, Yaeda Chini, Eshkesh, Dumanga, Endanyawish, Ma

Furthermore, there are 2 outreach clinics coordinated from the Kansay health center (Laja and Umbang), 3 from Gendabe health center (Birsimu, Barjomoda and Measkron) and 4 from Balang health center, 3 by car (Gabesh, Lalaji and Muraru) and 1 by flight (Gorimba).

---

*Side-note on flight clinics: waste of resources or cost-effective strategy?*

For one week every month, a pilot from the Mission Aviation Fellowship (MAF) flies a Cessna 206 from Arusha to Haydom to fly our RCHS personnel to the seven flight clinic locations. An important question that was raised during our strategic discussions is the cost-effectiveness of engaging in flight-clinics. We briefly dwell on that question here.

An important point to note is that MAF co-finances the flight-costs of our outreach program. To be exact, 48.5% of flight costs are subsidized by MAF (compared to their benchmark rate), 51.5% of are incurred as hospital expenses. The cost charged by MAF to the hospital per kilometer comes approximately USD 1,05 per kilometer, and a typical week of flight clinics covers 1.643 kilometers (including circa 500 kilometers transferring from Arusha to Haydom and back). Discounting these transfer kilometers, the effective price per flight-clinic kilometer is USD 1,52, approximately TZS 2000 at current exchange rate. This hospital cost per effective flight kilometer is less than double the cost of a normal car kilometer (valued at TZS 1,500). Given the fact that the plane can fly to the clinic destination in a straight line, whereas our cars would have to follow winding routes descending and climbing slopes (reaching Matala takes the plane 8 minutes and takes at least 3 hours by car – if the roads are passable) we can confidently state that engaging MAF as a partner to reach the flight clinic locations remains a cost-effective strategy.

---

In 2009, we phased-out from Dirim after the government health-facility was established there. Since then, Muslur and Labay have been identified as potentially ready to be phased-out of the Haydor program because the government has established healthcare facilities there. However, the district requested that we do not phase-out of those areas yet, because their facilities are not yet sufficiently staffed to provide the full primary healthcare function. In order to ensure uninterrupted primary healthcare services to these communities we have put our phase-out plans on hold until the district facilities are ready to take-over fully. In the next five years, we expect to be able to phase-out of Endaragadat, Muslur and Yaeda Chini. These plans are subject to government administering the required personnel to these centres.

Our RCHS typically sees around thirty thousand pregnant women and eighty thousand children per year. We believe the impact to health-outcome in our surrounding communities up to the remotest areas can be very large. For that reason, we define our overall strategy for the RCHS as “keep as is – conditionally continued MDG 4 and 5 funding”. However, we aim to continuously review outreach services to avoid duplication with government services.

Result	When
Increasing ANC attendance before 16 weeks from 20% today to 50% of all pregnant mothers by 2019	2019
The number of women delivering in health facilities rises to 70% (baseline: 43%)	2019
Male attendance of ANC clinics rises to 20% (baseline: 3%)	2019
Proportion of women attending at least 4 ANC visits increases from 39% today to 80% by 2019.	2019
Postnatal care (7 days) increases from 44% (mothers) and 38% (newborns) today to 90% by 2019	2019
Health facility deliveries / skilled birth attendance increases from 50% to 90% by 2019	2019
Proportion of children receiving Penta3 vaccinations increases from 95% today to 100% by 2019	2017
Reduction of stunting in children by 30% (baseline: 46% of all children in Manyara region)	2019
Family planning services: increase contraceptive prevalence rate from 30% today to 60% by 2019.	2019
Cervical cancer prevention services coverage of HLH catchment area rises from 0% baseline to 80% by 2019	2019

## Health centres

Complementary to our hospital, the ELCT Mbulu Diocese also has three health centres that function as satellites to our hospital, providing primary care to their surrounding area and referring more complicated cases to HLH. The three health centres are Kansay, Gendabe and Balangda Lalu.

For the past few years, Kansay Health Centre has faced some challenges. The government is yet to provide electricity and the health centre has been understaffed, which has caused patient numbers to decrease. However, since 2014 there is an AMO in full time service, leading to improvements. The other two health centres, Gendabe and Balangda Lalu, are performing quite well. An example is that patients in the Hanang area prefer to go to our health centre rather than to the district hospital available in Katesh, showing that the quality of service of our health centre is perceived to be higher.

HLH also runs one dispensary in Buger. The building was donated to the community by TANAPA, medicine is provided by the government but HLH provides staff. Possibilities of improving the management related to this dispensary will be discussed with the ELCT Mbulu Diocese.

The three health-centres are identified as strategic sites for the future function of the hospital, for several reasons. They can form useful sites for field-work in collaboration with our training facilities (see next chapter) and may become important sites for research programs (see the chapter concerning the Research pillar). In order to maintain and improve our health centres, we define the following strategies:

1. Continuing with outreach to the health centres, which means sending medical doctors and specialists there for working together with the health-centre staff which build capacity.

2. Stationing an AMO-doctor to each health centre, bolstering clinical capabilities and increasing the range of available services.
3. Securing a Public-Private-Partnership service agreement with the district. This secures staff, medicines and investment and prevents the government from investing in an own facility, which would lead to duplication of services and waste of resources.

Whilst seeking partnership with the government, it should be clear that ownership of the health centres should remain with the ELCT Mbulu Diocese.

Result	When
Gendabi has an AMO in full time service	2015
Balangda Lalu has an AMO in full time service	2017
Patient numbers to each health centre double	2018
A PPP agreement is secured for each health centre	2019

## Referral hospital at the Regional Level

Our hospital was officially assigned the status of referral hospital at the regional level on 12 November 2010. This status implies that the hospital offers specialised clinical services. Attainment of that status was an important step five years ago and since then our hospital has seen strong growth of its specialist services. Starting at zero Tanzanian specialist doctors just five years ago, today we count two gynaecologists, three general surgeons and one orthopaedic surgeon. Over the next five years, the number of specialists will double and every major department will be run under the supervision of a permanently employed specialist. Having specialists work at our hospital is a relatively affordable strategy because Tanzanian specialists generally qualify for government grants, which means that our hospital only needs to pay the extra allowances on top of basic salary.

In a country where doctors and specialists are a very scarce resource, we believe that having a number of specialists working at our hospital will attract other specialists as well, since they can be amongst their peers and work in an atmosphere of professionalism and strive for success. We also believe that the decisions to have one of our specialist doctors lead our hospital as assistant medical director and assigning doctors to the function of head of department, have been of strategic importance, because this sends a clear signal that we take our medical staff seriously and that their expertise is being utilized effectively. This helps maintain motivation of our specialist staff and may also help in attracting more specialists on the job-market.

The specialists we expect within the next five years are:

- 2015: Paediatrician expected back from training in September. We also aim to recruit a physician from the job-market.
- 2016: Physician expected back from training in September.
- 2017: Second paediatrician, a urologist and a dentist expected back from training in September.
- 2018: Second orthopaedic surgeon expected back from training in September

Given the level of achievement of the past five years since attaining the status of referral hospital at regional level, we define as a strategic long-term goal: to become a teaching consultant hospital at the national level. With long-term we mean longer than the next 5-year period. The second (training) and third (research) pillars fit well within this long-term goal. We explicitly articulate this longer-term goal because it helps create focus in strategy for the next 5 years and beyond.

In the following sections we go into more detail for our clinical services. For our specialist clinical services, we can distinguish broadly between specialised clinical services, diagnostic services and supportive services. In the following we formulate strategy for our clinical departments, as well as for the diagnostic and supportive services.

## Specialised Clinical Services

Our specialised clinical departments will in the next 5 years each offer both inpatient and outpatient specialised services. Our high-level goal for the next five years is to increase access to specialist services. To achieve this, we aim to achieve the following results:

Result	When
<p>The number of specialists increases to a minimum of 2 per department.</p> <p>We note that for a hospital the size of Haydom, the prescribed number of MD-specialists for regional level referral function is 21. We define this as a longer-term minimum number of specialists to strive for, as part of the longer-term strategy to attain consultant hospital status.</p>	2018
<p>The number of patients seen by specialist clinic increases from an average of about 15 patients per clinic day currently to 40.</p> <p>Once each department is run by a specialist, any patient admitted to the specialist function of our hospital shall be attended under the supervision of a specialist, whether it is the specialist himself/herself or an MD or MD-intern actually attending to the patient.</p>	2019
<p>The number of stay-days may increase as a result of increasingly complicated cases due to more highly specialised services, but if the staydays are adjusted for this effect, they should decrease as a result of improving clinical quality. *</p>	2019
<p>Morbidity and mortality decreases as a result of improving clinical quality. *</p>	2019
<p>An increasing number of patients needing specialised services are treated as outpatient in our specialised outpatient clinics. For Paediatrics and Internal Medicine, we aim over the course of the next five years to offer fully-fledged specialist outpatient clinics. We currently operate two specialist clinics: surgery and OBGYN. This result aims to reduce costs to the hospital and to patients by reducing the number of inpatients. We aim to only admit patients to the inpatient departments if clinically necessary. Patients who are able to follow the required treatment at home can be treated as outpatients. Baseline: 4,680 in 2015, aim: 16,640 by 2019</p>	2019
<p>The total number of patients coming to our hospital (inpatients plus patients treated in the specialised clinics) increases from 13,757 (2014 total) to 25,000</p> <p>This result should occur autonomously as a result of the growing reputation of the quality of clinical services of our hospital. The growing reputation should attract an increasing number of patients, including attracting more patients from further away, seeking high-quality care</p>	2019

\* Note that there will be a counter-effect to keep in mind. The more our hospital succeeds in building reputation as a high-quality specialised service referral hospital, the larger the number of complex cases can be expected to come to our hospital. This can have the opposite effect on stay-days, morbidity and mortality. These results are for that reason not measurable presently, but clinical research may open up avenues to make these result areas measurable in the future.

### *Specialist outpatient clinics: To build or to rearrange?*

For the goals related to specialist outpatient services, ideally we would construct a new building offering all the facilities required in a well-arranged plan. However, given our separate goal of achieving the construction of an entirely new hospital building, the construction of a new outpatient specialist services could be part of the new building plans. Optimally, we might find a partner willing to help us realize a new building for specialist outpatient services earlier, in which case we can go ahead with the realization of such a building keeping in mind the future plans for establishing a new hospital. This means that the new specialist outpatient building would have to be a logical adjacent building to the envisioned new hospital building.

However, we do not want the further development of our specialist outpatient services to have to be conditional on the realisation of a new building. We therefore explored the option of how to rearrange current building allocations in order to free-up space for outpatient specialist clinics. We came to the following solution. This might be sub-optimal compared to constructing a new building, but we believe it will function and as such provide an important impulse to the quality of our specialist services overall.

For the eye clinic, specialist clinics are already up and running and the current location is suitable (within the eye clinic).

For the Paediatric outpatient clinic, restructuring the large front area of Lena Ward can create the required space. The Surgical, Medical and OBGYN outpatient clinics can share a location. For these, the space of mental unit together with space from TB ward can be reassigned to specialist clinics. This is a strategic location for outpatient specialist clinics situated close to the Laboratory and Radiology, and centrally located between the various inpatient departments. The rearrangement should be possible because the TB ward has fewer inpatients these days and the mental unit has some space to spare.

These plans will be realised in 2015. This will accommodate the OBS/GYN and surgical specialist clinics which are already up and running but lack a good location, as well as an orthopaedic specialist clinic to start functioning in 2015. We expect our first paediatrician to return from training in September 2015 which means the Paediatric specialist clinic can begin functioning from that date. If we succeed in recruiting a Physician an internal medicine specialist clinic (including diabetics) can also begin operations in 2015, if not it will have to wait until September 2016. Finally, in September 2017, a urology specialist clinic can begin to function as well as a dental specialist clinic.

### *Surgical department*

Our surgical department consists of several outpatient specialist clinics, inpatient reception/emergency care, general surgery ward, orthopaedic surgery ward, theatre and intensive care unit (ICU). In 2014, our surgical department went through an important change as the result of three of our medical doctors returning from specialty training as surgeon specialists. This has given a large impulse to the quality of our surgical department. We want to continue these improvements with the strategies identified in this section.

First of all, given the large needs in our paediatric section we define as a goal that by 2016 one of our general surgeons has been trained for performing paediatric surgery, by way of on-job training and an exchange period to a hospital with a paediatric surgical unit.

Second of all, we define the need to aim to train one more MD as general surgeon. The reason for this is that the functioning of the surgical department is central to the functioning of our hospital and if we should lose one of our present surgeons this would create new challenges for our hospital.

For both the in- and out-patient function, an important improvement that we want to achieve is increased endoscopic examination. Currently, only one very old endoscope is available so new endoscopes need to be acquired.

### *Specialised surgical outpatient clinics*

Our specialised outpatient clinics that fall within the surgical department are outpatient surgery, eye surgery and in the future, dental surgery.

For the outpatient surgical clinic services (primarily medical examinations such as endoscopic examination, PV, screening) to function well, examination rooms and up-to-standard equipment is needed.

Our strategy will be to increasingly offer outpatient surgery to patients who do not require admission, increasing the number of day-care surgeries and reducing admission numbers.

### *Reception/ Emergency / Casualty unit*

Currently, our reception area serves to welcome and register patients and assigns them to the various wards (triage function). Our goal is to upgrade this reception function to an emergency care unit. This will improve patient care because sometimes patients arrive in critical condition and require emergency care. To achieve this goal, we define the following results to be achieved.

The present General Surgery ward is available for expansion of emergency medicine and resting and recovering area for the patients.



Result	When
A team of staff (including doctors) is dedicated to the emergency care function	2015
Our Quality Improvement Team (QIT) concludes that the emergency care unit is well-organised at all times, meaning for instance that medication and IV fluids are properly arranged and readily available / easy to find during an emergency setting	2016
The full staff team has received training for providing emergency care	2017
A bilateral exchange program exists with a likeminded institution. Within this program, we provide our staff with the opportunity to learn at a facility where emergency care practice is good and we also invite experts to visit Haydom to provide local training	2017
The reception area infrastructure suffices to provide high-quality emergency care. This includes obtaining resuscitative equipment and patient monitoring and the minor restructuring of the current building to allow for examination rooms and observation rooms	2017

### Orthopedic surgery ward

Currently our orthopaedic ward is performing quite well with one orthopaedic surgeon and a very experienced AMO. Due to increasing use of motorcycles in our catchment area, more accidents occur and the need for orthopaedic services is increasing. A second orthopaedic surgeon is currently in training and expected to return in 2018.

One important way the functioning of the orthopaedic services can improve is by acquiring a SIARM machine. A SIARM machine enables the surgeon to visualize the bones with x-ray real-time during the operation, allowing for more accurate procedures. The improved outcome as a result of this allows patients to recover much faster, e.g. after 2 weeks, instead of the current method whereby patients have to be put on traction, needing to stay for 8 weeks on average. This will save a large amount of patient stay days, freeing up beds and nursing capacity. The cost of a SIARM machine is approximately USD 25.000.

Result	When
A SIARM machine is acquired and functioning.	2016
Average number of staydays in orthopaedic ward decreases from 24 days in 2014 to 14 days	2017

### Theatre

The presence of three general surgeons and two gynaecologists means the hospital theatre is used intensively. We currently have 4 major theatres and 1 theatre for urological and endoscopic examination. For the quality of clinical care in our theatre to improve further, we have defined the following results that are to be achieved over the course of the next 5 years.

Result	When
Two working autoclave sterilizers in use and at least one working autoclave sterilizer available as back up.	2015
Two theatre nurses have been trained (in Kenyan training program since no Tanzanian program currently exists)	2016
The number of neurosurgical procedures increases by 30%. To achieve this result, on job training and exchange program are in place.	2017
Two AMO anaesthetists have been trained and are working at our hospital	2019
The theatre is a so-called “stainless environment” meaning building and materials is up to international hygienic standards. Achieving this is conditional on finding a partner willing to help us achieve this goal. The timeframe given is the latest date, to be achieved earlier if funding allows.	2019
Laparoscopic surgery is performed at our hospital. The main challenge to achieving this is obtaining the right equipment. Training our staff for this skill is easily attainable by consecutively sending two of our surgeons for several weeks training in another facility where laparoscopic surgery is already performed.	2019 at the latest

### Intensive Care Unit

Our ICU is identified as one of the areas where increased quality of clinical care can have important benefits for patient outcomes because this is a very central function to the hospital and the challenges in terms of sick patients are very large here. The standard of care needs to be very high in order to have most patients recover quickly from their ICU stay.

The quality improvement of clinical services, which we identified as a foundational strategy to the further growth of our hospital therefore, plays a central role in the strategy for our ICU for the next 5 years (especially staff motivation, training and monitoring and evaluation). For that reason, our efforts to improve the quality of clinical services will be especially focussed on the ICU to begin with. By the end of 2015, we want to see measurable results in terms of quicker recovery (fewer ICU stay days), and reduced mortality.

Result	When
A survey has been carried out under ICU staff to assess general motivation and staff morale, defining baseline figures	2015
Staff motivation and morale has improved by 20% compared to 2015 baseline as a result of staff motivation program defined as foundational to achieving improvements in quality of clinical services	2016
Number of stay-days has decreased by 25% compared to 2014 baseline 3.46 staydays	2016
Mortality has decreased by 25% compared to 2014 baseline of 19.4%	2016
All nurses assigned to ICU have received ICU care on-job training	2017
A bilateral exchange program with likeminded institutions such as MOI is in place and functioning	2017
Each bed has a working patient monitor and ventilator	2019
The ICU has a so-called “stainless environment”. This will be achieved at the latest by 2019 but earlier if funding allows	2019 at the latest

### **Medical department**

Known as “Old Ward”, Our Internal Medicine department (together with the main pharmacy) is housed in the building in which our hospital originally started service in 1955. 60 years later, the building shows signs of old age and the roots of the now large trees that were planted inside the square at the very start of the hospital are cracking the foundation of this building. Aside from concerns over the structural integrity of the building, the department has also outgrown the available space of the old ward. Since we want to work towards realising a new hospital building over the next 5 years, it does not make sense to construct a new building to house the Medical department. However, taking into consideration the building-related challenges that are also facing the pharmacy, it may make sense to carry out the minimally needed amount of construction to jointly tackle these challenges. In 2015, a clear plan will be worked out how to solve the physical space challenges of both medical department and pharmacy at minimal cost.

An important remaining challenge to the medical department in terms of human resources is the lack of a Physician. However, this challenge will be resolved by September 2016 at the latest, when one of our MD's who has completed his specialisation as Physician. This need is great and urgent so if we find a possibility to recruit a Physician in the mean time, this will be done.

Whilst we await the arrival of a Physician, improvements to the diagnostic and monitoring services of the Medical Department can be made, involving investment and training. These improvements will be achieved by 2016.

Result	When
Plan is designed to overcome Old Ward building challenges for the short term	2015
Physician is recruited from the job market if available	2015
Number of stay-days has decreased by 25% compared to 2014 baseline 8.28 staydays	2017
Mortality has decreased by 25% compared to 2014 baseline of 12.2%	2017

### **Tuberculosis ward**

Currently, the TB ward is a separate wing in our hospital. However, due to changes in treatment regime presently there is no large need for a separate TB ward. Rather than admitting patients, most TB patients can be treated effectively as outpatients. The few patients that do need to be admitted can be treated as inpatients in our Medical department, including those patients needing isolation.

The strategy is therefore to migrate towards this method of treatment, increasingly treating patients as outpatient. This will free up the area currently used by TB ward for other purposes, allowing us to carry out the plans of the next 5-year period in the interim period before a new hospital building is realised.

Result	When
90% of TB patients treated as outpatient, remaining inpatients admitted to internal medicine ward. Baseline 2014 574 patients.	2016

### *Paediatric department*

Our Paediatric department, known as “Lena Ward” is a very large department with on average more than 50 patients staying in the ward on any given day of the year. Currently, the department is run by and MD with strong paediatric experience. By September this year, we expect our first Paediatrician to return from specialisation training and a second should follow by September 2017.

We believe that one of our hospital’s strengths is high quality clinical care to mothers and children and the quality of care at Lena Ward plays a central role in this. Given the critical importance of having Paediatricians working at our hospital, we aim to send a third MD for specialisation as Paediatrician as soon as a suitable candidate is found.

As results for the further improvement of care at Lena Ward, we define the following.

Result	When
Two ward-rounds per day: The paediatric ICU neonatal room are passed by our doctors twice a day (currently one per day)	2015
Two neonatal rooms operational, one for septic and one for non-septic conditions (currently one is operational)	2015
Two ward-rounds per day: All paediatric patients are passed by our doctors twice a day (currently one per day)	2019

As part of our strategy in the past year to increase financial sustainability, we have introduced cost-sharing with our patients for delivering at our hospital. Looking at major statistics such as number of deliveries, it is clear that cost-sharing has had an impact, because the number of deliveries in 2014 has decreased compared to 2012 and 2013. However, an important question is what the effect of these changes is on the health-outcomes for our patients, i.e. the mothers and new-borns. As part of our strategic plans for research (see the “3<sup>rd</sup> pillar” chapter, p. 36), we plan to identify key research questions facing our hospital. The question identified here can be the first one on that list.

	2010	2011	2012	2013	2014
Number of deliveries at HLH	5.086	5.461	5.164	5.460	4.588

### *Child Care Unit*

A small but important function in our hospital is the Child Care Unit (CCU). When a mother dies in childbirth the infant is very vulnerable and needs very good care; care that goes beyond simple hospital care. For that reason we have the CCU where infants can spend their first 6 to 12 months under the loving care of the CCU team. The relatives of the infant are welcome to leave their child at the CCU for up to 1 year, from that age onwards the relatives will usually be able to care for the child adequately themselves.

There is a charge to the relatives of the child for leaving the child in the care of the CCU. However, the income generated as such does not match the costs. We believe that if we clearly communicate the

important function of this small unit to the outside world, we should be able to find one or more partners for continuing to carry out this work.

For our next five-year period, we aim to define and execute a suitable strategy how to continue this function, and how to find the means available to continue to run the CCU.

Result	When
The CCU is sustainably funded through external partner(s)	2019

### *Obstetrics and Gynaecology department*

Tanzania as a whole still has high numbers of maternal and perinatal death. Haydom Lutheran Hospital performs much better than the Tanzanian average but numbers are still high compared to most of the rest of the world. Since our hospital treats women and children from the beginning of pregnancy until the end of the postnatal period, we potentially have a large influence on maternal health and perinatal health in our region. This gives us a great responsibility and challenge where we should aim to reduce the number of deaths and complications to the lowest that can possibly be achieved.

Another large and relevant health-problem in Tanzania is cervical cancer. Many women die unnecessarily for lack of treatment, whilst pre-cancer lesions can be treated effectively, if screened for. For that reason, we aim to set up a cervical cancer-screening programme for our region, in collaboration with the government. In our setting, the most effective screening method is VIA (visual inspection with acetic acid) and treatment with cryotherapy.

We define the results that we aim to achieve in the next 5 years below.

Result	When
Separate operating theatre for Maternity realised	2015
Perinatal death-rate decreases by 25% in the five-year period	2019
Maternal death-rate decreases by 25% in the five-year period compared to previous 5 year average of 224 per 100.000 deliveries (0.22%)	2019

### *Physical rehabilitation (physiotherapy, occupational and orthotics)*

Our hospital has been offering physical rehabilitation services to its patients for many years. We currently have three physiotherapists employed and we often welcome volunteer physiotherapists from abroad as well. Physical rehabilitation is an increasingly crucial aspect of recovery for many of our patients, especially now that our surgical services have increased with the availability of three general and one orthopaedic surgeon.

Our strategy for the physical rehabilitation services is therefore to further improve. More if our patients should have access to these services. For this to be achieved, more manpower is needed. Capacity building can be achieved through continuing to invite international volunteers and by setting-up an exchange program with a like-minded institution.

A second area for improvement is the availability of orthotics (prosthetics). Two of our physiotherapists are qualified orthotic technicians but frequently lack the raw materials required to produce prosthetics for our patients, having to refer them elsewhere instead.

Result	When
Fourth physiotherapist recruited	2016
Raw materials for orthotics always in stock	2017
Exchange program with like-minded institution functioning	2018

### Mental health

Currently, our hospital has the Amani Ward, which offers a program treating alcohol and drug addiction. However, mental health services can of course be much more comprehensive than addiction treatment. In our part of the world, mental health services are not yet well developed and many mental health issues are not treated adequately.

As part of our overall strategy to “lead the way”, we aim to take a leading role in the development of mental health services in our region, including preventative mental health. For this, a first requirement is to recruit a psychologist. Furthermore, we aim to build the capacity of our staff to enable them to offer mental health services through setting up an exchange program with SSHF through a Peacecorps program.

HLH is running 27 outreach clinics. So far mental health has not been a priority within these clinics. In the next few years we will try to focus on capacity building within mental health that will give us the opportunity of implementing mental health care within the clinics. Our approach will build upon the WHO Mental Health Gap program and can potentially make an important difference to the mental health outcomes of our catchment area.

Result	When
Psychologist recruited	2015
Nurse sent on exchange to SSHF Norway for capacity building	2016
Second nurse sent on exchange to SSHF Norway for capacity building	2017
Pilot of preventative mental health program through reducing child-abuse (through parental violence) is conducted	2018
Implement mental health care within the infrastructure of the RCHS clinics	2018

### Eye department

Our eye department is functioning well, with one AMO-specialist ophthalmologist and a comprehensive outreach program. Our strategy for this department is simply: keep as is.

### Diagnostic services

Diagnostic services play a key role in the quality of clinical services, helping to come to accurate and timely diagnosis of patient conditions – a requirement for effective treatment. The two main diagnostic services of our hospital are the laboratory and the radiology department.

## *Laboratory*

Our hospital is blessed with a modern and well-equipped laboratory. Nevertheless, important areas for improvement can be identified. As an overall result, we aim to achieve 4-star accreditation (out of maximum 5-stars) by the end of this 5-year period (our laboratory has received its first star in 2014). The accreditation program is the African Society for Laboratory Medicine (ASLM) using ISO 15189:2007.

In order to improve the range and accuracy of diagnostic services offered by our laboratory, we need to obtain the following equipment:

- Critical equipment to have: T3, T4, TSH, ELISA machine, INR (coagulation machine),
- Nice to have: Tumour markers (PSA analysers, SERUM HCG and CA125).

The laboratory needs are prioritised based on (a) patient need (b) in-house availability of experts who need the diagnostic and (c) economic considerations (i.e. can we afford to purchase the equipment or can we find support to obtain it?).

## *Radiology*

Under optimal circumstances, our radiology department would be rebuilt to better and larger specifications, but since we aim to realise a new hospital building over the next five years, the strategy for these five years is based on the existing facilities.

The biggest challenge facing our radiology department is the availability of radiologists. Radiologists are very hard to find or retain in Tanzania but if one should become available, we will recruit. If one of our MD's would like to specialise to become a Radiologist and commit to working at Haydom after such specialisation, we will sponsor his or her specialisation. We currently do have one AMO radiologist and can have a second AMO radiologist trained, and we can also train radiographers.

Radiologists are scarce in Tanzania because of a lack of training facilities. As a strategy within this Tanzanian reality (linked to the overall strategy of training programs as part of our second pillar teaching hospital strategy), by recruiting or training a Radiologist we can set up a radiology school, which can help Haydom secure access to the required personnel for the longer term.

The x-ray equipment used in our radiology department can be modernised relatively easily by obtaining digital plates for the imagery instead of the currently used analogue plates. This strategy is cost-effective in two ways: it allows upgrading of current equipment rather than having to fully replace current equipment, and using digital plates saves costs of analogue development materials that will no longer be required.

Digitalising imagery also has several advantages. The quality of images improves, storage needs decrease, and no fluids for development will be needed. Furthermore, the digital images can be shared to our clinical departments by computer, uploaded to the digital patient file, saving valuable time in the diagnosis-to-treatment cycles surrounding our patients.



Our radiology department currently operates a CT machine; one of the few working CT machines in Tanzania. Ideally, a second CT machine is obtained that is serviceable within Tanzania or East Africa to ensure 100% uptime of our CT machine.

## **Supportive services**

### ***Pharmacy***

Since our pharmacist returned from his further training at Bugando hospital, our pharmacy has overcome most of its challenges and our doctors are increasingly taking for granted that most medicine is always available. This is in stark contrast with just one year ago, when our doctors would usually expect stock-outs of many important medicines.

Despite the strong improvements of the past year, our pharmacy nevertheless faces some important challenges. One challenge is related to special planning; the various pharmacy stores are scattered. For the pharmacy to function more efficiently, the main pharmacy should be organised in a single location.

For the physical space challenge, one solution can be to use the empty area behind the main pharmacy for a simple expansion plan. This can be achieved with minimal expense. However, as was noted in the section addressing the Medical Department, that department also needs more space and one logical area for them to expand into is the area currently occupied by the main pharmacy. For that to be possible, the pharmacy has to be entirely reallocated, for which a separate building would need to be constructed. As was noted in the previous chapter, we want to avoid the construction of new buildings as much as possible in the interim period before we construct an entirely new hospital building, but the pharmacy may be the one case that deserves exception. Plans will be developed further in 2015. If a new building is constructed for the pharmacy function, we want to ensure that it will continue to have a useful function even after a new hospital building (with integrated pharmacy) is realised.

A second challenge is related to human resources – further training of personnel will help the pharmacy improve further. For optimal functioning of the pharmacy for a hospital the scale of ours, four or five pharmacists are needed. We currently count one and a second one will return from training in 2015, so at least two more staff have to be sent for further training to become pharmacists. Training takes four years so as an alternative strategy for 2016 and 2017 we will attempt to recruit at least a third pharmacist.

One of our administrative goals that has an impact on pharmacy is the goal to integrate computer-based patient administration, billing and financial administration. An important aspect of patient billing is the medicines dispensed to patients, so the dispensing process must be adapted in such a way that pharmacy dispensing goes to the patient and this is recorded in the computer at the point of dispensing. For this to be achieved, sub-pharmacies need to be established in each ward. The process will then be that main pharmacy dispenses to sub-pharmacy and sub-pharmacy dispenses to patients. For each sub-pharmacy location, a pharmaceutical technician will be required.

We currently employ nurses who do the pharmacist technicians work in OPD, CTC and pharmacy. Our plan is to replace these nurses with pharmacy technicians, which will be a budget-neutral way of achieving more specialised personnel taking care of this important hospital function.

Finally, we aim to send one member of pharmacy personnel for a short training for the extemporaneous preparation of narcotics (short training for one personnel in 2015, one in 2016). This will allow our pharmacy to prepare hospital narcotics itself based on ingredients rather than having to procure the final product, saving costs in material and logistics.

Result	When
Third pharmacists sent for training	2015
Each department has its own sub-store for dispensing to patients	2015
One pharmacist or pharmacy technician is trained for the extemporaneous preparation of narcotics	2015
Two pharmacist technicians recruited	2015
Two more pharmacist technicians recruited	2016
Fourth pharmacists sent for training	2016
Main pharmacy is located in one central location	2016
Second pharmacist or pharmacy technician is trained for the extemporaneous preparation of narcotics	2016

### *Ambulance*

Our hospital currently runs four ambulances, requiring twelve ambulance drivers. Running these ambulances represents a relatively large cost to the hospital, which has to be carefully weighed against the benefits. Previously, two ambulances used to be in service. With the generous and highly beneficial MDG 4 & 5 grant from the Norwegian government, two ambulances were added specifically for this program.

Due to the development of the region surrounding our hospital, the real need for ambulances has decreased. These days most areas are accessible by road and there is an increasing availability of public transport options such as public landcruisers and “boda boda’s” (motorbikes that function as taxi). We therefore believe a large part of the function of our ambulances (transporting patients who have no other transport available) is becoming redundant.

We therefore aim to carry out several analyses to aid in making some sensible changes to our ambulance program. First of all, a very clear cost and income analysis of our ambulances is required. If the ambulances are costing the hospital more than they earn, we aim to either increase the price to cover cost, or to reduce the number of ambulances by two. One ambulance should remain for MDG 4 & 5 related services and one for emergencies, when a patient urgently requires transport and has no alternatives. We will also analyse clearly which areas in our catchment area have no alternative for ambulance services for their transport.

In carrying out this strategy, public relations will need special attention. Many of our communities have come to take our ambulance services for granted, so we will need to communicate clearly and openly

with them about the ambulances, the changing of the times and the fact that our hospital can not afford to continue to offer subsidized services when there is no sponsor or donor footing the bill.

Furthermore, our ambulances currently serve to collect hospital personnel called to emergency work during the night. This leads to costs of ambulance and driver availability. In 2015, we will carry out a cost-benefit analysis of the current method compared to offering hospital accommodation (including call/night-allowance) to those staff that has to be available on call during the night.

Result	When
Ambulance movement analysis carried out for a full month	June 2015
Ambulance need analysed for hospital catchment area	2015
Based on movement analysis, strategy to make ambulances cost-covering is drawn-up	2015
If analysis confirms need, hospital on-call personnel will be offered accommodation within the hospital when on-call	2015
Depending on analysis, price increases or ambulance reductions carried out	2016

### *Section Medical Technology*

A crucial function of any hospital is the maintenance of medical equipment. To date, this maintenance has been the responsibility of various technicians working in the technical workshop of the hospital. However, no single hospital unit carries clear responsibility for the continued maintenance of medical equipment. In 2014, we decided that for the maintenance to improve, we would need a specific team that carries clear responsibility for this important task. For that reason, we have established the “Section Medical Technology” (SMT). All medical technology and all technical equipment that serves the core function of the hospital function falls under the responsibility of this unit.

For the development of the SMT, we have set up an exchange program with Sørlandet Hospital (SSHF). In the context of this exchange program, a medical technician from SSHF has visited our hospital several times for several weeks, assisting in the establishing of the SMT and capacity building of our team. His visits are sponsored by the Friends of Haydom. In 2015, we also aim to send one of our SMT technicians to SSHF by way of exchange programme for further capacity building.

Result	When
Preventative maintenance plan is in place	2015
One SMT technician has been trained through exchange program with SSHF	2016
SMT is sufficiently equipped with tools and testing equipment to be able to test and service all major medical equipment	2017
Medical technical library is in place where technical documentation is stored and available in an well-organised way	2017
All medical staff dealing with medical equipment receives periodic training on safety and correct usage of equipment	2017

### *Laundry*

A good laundry function is crucial to the hospital, for obvious reasons. Our current laundry function is extremely out-dated; some equipment (still being used) is more than 50 years old. This crucial hospital function has received too little investment for a long period of time. Not only equipment but also the laundry human resource requires investment – qualified laundry staff is needed to ensure the laundry is done correctly. This avoids the spread of disease through bed-sheets, blankets and towels.

The laundry machines serve the core function of the hospital so their servicing falls under the responsibility of the Section Medical Technology.

Result	When
A renewal plan for the laundry function is formulated and funding is sought	2015
Two laundry technicians are recruited	2015
Laundry is upgraded to modern standards	2016
Two more laundry technicians are recruited	2017

### *Technical Workshop*

The technical workshop serves as a supportive service to the hospital. Important functions supported by the workshop are generator maintenance, water maintenance and carpentry. Ambulance maintenance is carried out by the garage function, which is administratively separate from the technical workshop. The ambulance maintenance is an internally paid service carried out by garage, which ensures clear separation of the garage function from the hospital function.

For the technical workshop, our strategy will be to review what is specifically needed in terms of supportive services. The non-core services have already been separated from the core hospital function administratively, we want to continue this process by separating those functions practically (operationally) as well.

Result	When
Carpentry function has a year plan in place and keeps stock of materials according to plan	2015
Electrical function has a year plan in place and keeps stock of materials according to plan	2015
Plumbing function has a year plan in place and keeps stock of materials according to plan	2015
Core hospital supportive services reviewed and non-essential services phased out	2016
Non-core hospital services separated operationally	2017

### *Palliative services*

The palliative services of our hospital are charitable services to our community. We aim to be able to maintain these services since they fulfil an important humanitarian role in the care for chronically ill and terminal patients. In order to maintain these services, we aim to find more external support for the financing of these charitable services.

If we succeed in finding a partner for delivering palliative care services in our area and if funding allows, there are several improvements that we can aim to achieve over the next few years. Such improvements are to attract a doctor to the palliative care team, to build capacity of the palliative care team with exchange programs, increasing number of visits to patients and improving the car availability to the palliative care outreach services. However, all these improvements are subject to finding a suitable partner first, which we define as the main strategic goal for this 5-year period.

Result	When
Palliative services fully funded by external funds (charity)	2017

## Pillar 2: Training institute

The longer-term strategic goal of our hospital is to become a university hospital. The intermediary goal towards achieving this long-term goal is to develop a training institute and become a fully-fledged teaching hospital.

The development of a training institute is key to the long-term improvement of quality of clinical services of our hospital. Since 2010, our hospital has set out on the path towards becoming a fully-fledged training hospital. This strategy was supported by the CMI end-of-term (2005-2010) evaluation report.

The aim of this strategy is to increase the number of qualified personnel. Given the population basis, the existing level of services and infrastructure and network of national and international training partners, it was decided by the hospital board that the hospital is a natural site for conducting training to increase availability of qualified staff both to the hospital as well as to the national human resource needs.

At the time of that decision, our hospital already counted one important training institute within its grounds: the Haydom School of Nursing, training nurses up to Diploma level. Since that time, our hospital has started participating in the national training program of medical intern doctors, welcoming up to fifteen interns each year. The benefits of participating in this program are already obvious. Under the supervision of our specialists and doctors, the fifteen interns function as an extension to them, reducing the work-load for our medical staff.

- 1) Establishment of training programs forces the institution to have in place the right personnel for teaching
- 2) Teaching forces personnel to stay up to date and critically think about the care that is provided, since the students need teaching
- 3) Teaching opportunities for qualified staff increases motivation because the work becomes more dynamic and there are more intellectual opportunities and career opportunities
- 4) This is an extra area that helps to build support from Tanzanian government and likeminded institutions (e.g. universities in Tanzania and abroad)

Result	When
An area of land owned by the hospital has been identified and assigned to the future function of the Training Institute.	2015
Clinical Officer training school (diploma level) established	2016
Laboratory technician school (diploma level) established	2016
Teaching hospital status is achieved	2017
Pharmacy technician school (diploma level) established	2018
Plan for construction of student hostel is developed	2019
Plan for establishing Bachelor in clinical medicine is in place	2019

## **Pillar 3: Research**

Research is part of treatment. As long as research is relevant to the community we serve, research is important to our hospital. For the purposes of developing our strategy in terms of research, we distinguish three categories of research (although generally research is really just one big area):

1. Academic research
2. Hospital based health services research (operational research)
3. International research

These three can have interrelationships but for the purposes of this strategic document we treat them independently. Each is discussed separately below.

### **Academic research**

This first category refers to research under academic institutions carried out by students, e.g. as part of their curriculum. This category of research is not discussed further in this chapter, but since the hospital has as its strategy to become a teaching hospital (and eventually a university hospital), this category is relevant for the training pillar (see the previous chapter, p. 35). However, this category will benefit from strong categories 2 and 3 below.

### **Hospital based health services research (operational research)**

This category of research is internal health research to help us improve our operations. Hospital based health services research aims at trying to identify the gaps of our hospital care. This is a category of research that can help us identify key questions facing our hospital in the functioning of the clinical services. Such research can be carried out by any skilled person interested in pursuing the research objective and who is capable of carrying out such research in a systematic and professional way. This can contribute expertise and knowledge transfer.

There are, in our expectation, many qualified candidates who could at the same time contribute to our hospital with their expertise and through knowledge transfer, e.g. doctors, nurses, lab scientists, pharmacists or other hospital-relevant personnel. One condition will be that each research project must include at least one equal partner from within the local staff to ensure the knowledge remains after the end of the research program.

Our strategy is to grow this category of research and make it work for the hospital by collecting relevant questions that face our hospital and publishing these questions as research opportunities on our website and in other relevant media.

This strategy relies crucially on reliable hospital statistics. For that reason, the first step is to scrutinize the current process of collection, storage and analysis of our current hospital statistics.



Result	When
Assess and, if necessary, improve, the current process of collection, storage and analysis of hospital statistics	2015
Collect research questions relevant to the functioning of our hospital and publish on hospital website and in other relevant media	2015
Keep list of research questions up to date	2015 onwards

## International research

This category of research is what our research centre is involved in. This type of research is generally supported by large grants. As a hospital, we can invest in this function by building infrastructure and reinvesting the overhead payments into infrastructure. After a period of investment (e.g. 10 years) the research centre is likely to become income generating, supporting the hospital in various areas. This support can be in the form of covering parts of personnel salary, introducing innovative techniques or equipment in our wards helping to improve patient care, or supporting other improvements in patient care.

Our main strategic goals for this function are to put Haydom on the map internationally, promote health activities, attract international experts and provide career opportunities to our staff. Pursuing these goals will have many direct and indirect benefits for the hospital. We aim to increasingly invite international experts involved in large research programs to Haydom, allowing them to see the opportunities at Haydom and spread the word that Haydom is a worthwhile partner for investing in large research projects.

A unique selling point that we have is the direct access to our rural low-resource population, compared to most other lower-income research facilities, which are more typically situated in an urban setting. Haydom is the hub for a large catchment area of rural population and our successful outreach program has created a unique infrastructure that is very suitable for community based studies, with maternal & child health being a particularly strong point.

If there are facilities that the hospital can contribute to the growth of the research centre, such as empty containers used for expansion plans, these are contributed. As the hosting hospital we can also contribute space to facilitate the growth of the research centre.

To assure sustainability of the research function in terms of human resources, some of the functions (e.g. statisticians, epidemiologists and research administration) may need to be employed on a permanent basis rather than on the temporary basis that individual research programs can offer. We can also invest in the further development of functions, e.g. with scholarships. Part of the overhead from research programmes could be assigned to this. Taking such steps instates a robust system that does not overly rely on individuals for the success of the institute, such that personnel changes will not interfere with the development of the research centre.

As a host site for research programmes, we believe our hospital has a lot of strong points to offer. Not only do we offer strong infrastructure and unique access to our surrounding rural population, we also

have the experience of more than five years of hosting several large international research programs. This has given us invaluable experience in grant administration and we have a very capable financial administration able to manage large grants.

One last area that deserves our attention in this regard is the NIMR approval process that is required for any research program in Tanzania. This process can be a lengthy one, which can at times work counterproductively to the goals of a research program. Even though this aspect lies for a large part outside our control, we are committed to work closely with NIMR to ensure these processes run as efficiently as possible. We will continue to cultivate a strong relationship with NIMR to facilitate successful and effective approval processes for any new research that chooses our hospital as its partner. As part of this strategy, we aim to establish an Institutional Review Board (IRB), which can work together closely with NIMR to facilitate the approval process.

Result	When
Identify and capacitate key functions and personnel to ensure future sustainability and growth of the hospital research pillar.	2015
Allocating additional space to facilitate the growth of the research centre.	2015
Facilities that the hospital can contribute to the growth of the research centre, such as empty containers used for expansion plans, are contributed.	2015
Institutional Review Board (IRB) established	2015
Continue inviting international experts involved in large research programs to Haydom	2015 onward
Reinvest the overhead income from research into expanding the research infrastructure (first priority: expansion of research laboratory)	2016 onward

## Non-medical services

These are services that are not central to the hospital function. If we lost these functions, it would have marginal impact on the quality of service of the core hospital services. The only reason for these services to exist is to be income-contributing to the core-hospital function or other strategic reasons (e.g. capital investment). This means that each of these activities has to be clearly administered and it should be clear that each runs at a surplus or other benefit to the hospital, thus contributing to the core of the hospital.

## Farmland

The hospital owns reasonable amounts of land in its catchment area. Most of this land is currently being used for farming. Strategically, owning this land is beneficial because it allows for future growth scenarios. By farming this land we ensure continued ownership, which is our future capital. Therefore, this is capital investment. Most of this land has been given to the hospital by the surrounding communities, as a way of support from the community for the hospital.

In order to understand the complexity of this subject, it is important to bear in mind that for most of the land, ownership is currently not legally defined through title deeds but is defined through general consent of the community. This is slowly changing, more and more communities are gaining formal title deeds to confirm land-ownership and as this process develops, the hospital may also expect to gain formal title deeds legally confirming land-ownership.

In considering how to manage this land (farm, rent-out, sell) the relationships with the surrounding communities has to be carefully considered. A commercially logical option might seem to be to rent out the land to ensure guaranteed yearly income to the hospital without requiring any resources from the hospital, but this option disregards the relationship with the surrounding communities.

If a renter takes charge of the land, this land-renter may not consider the needs of the community (e.g. not allowing them to graze their cattle on the land). This can lead to anger in the community and harm the relationship between the hospital and the community. The community may say that the land was given to the hospital to support the hospital's own activities, but not to rent out commercially to a third party.

In fact, there are examples from the past that illustrate the importance of this. In 2007 and 2008, all the farmland that HLH owns was handed over to a commercial company. Once the communities discovered that ownership had changed, they refused and they wanted to reclaim the land. To avoid this from happening, the land ownership was transferred back to the hospital and through diplomacy the relations with the majority of the communities was restored. The hospital then tried outsourcing a small area to a commercial business, but again, the community disagreed vehemently. The hospital lost about 100 acres to the community through damaged community relations.

To ensure the smooth running of the hospital and ensure the security of hospital property, Community relations should not be underestimated and need to be closely and carefully guarded. The community is our partner.

One of the questions that might also be considered, is that if the currently owned farmland does not generate a large surplus for the hospital, why should the hospital not simply hand the land back to the communities? The answer to this question is that owning the land counts as capital and has expected future strategic benefits, allowing for possibilities of expansion and further development of the hospital or the institute as a whole.

For the reasons explained in the above paragraphs, we believe the wisest strategy with regards to the ownership of large amounts of land in our catchment area, is to continue to hold ownership of this land, foster good community relations regarding the use of that land, and continue to farm these areas even if this activity does not generate a large surplus. To be clear: this farming activity is expected to generate a surplus to the hospital, but it is not expected to be a large percentage of costs. Even if the surplus is low, continuing to own the land in this way will not be costly to the hospital but will keep options for future development open.

Result	When
Formal title deeds obtained for Waredic and Wandela farmland.	2017

### Garage

As a result of the large land-ownership described above, and the need to carry out farming activities on that land, we have a reasonably sized garage equipped with large machinery (large tractors, trucks, excavator and other farming equipment) and personnel skilled in the use and maintenance of this equipment.

The hospital profits from the presence of the garage in two ways. First of all, the farming activities – separately budgeted – do generate a surplus (including the cost of the garage function) albeit a modest one. The benefits described above (in terms of land-ownership) therefore apply.

Secondly, the hospital itself frequently needs construction work or road maintenance done. This work can generally be done quickly and at low cost thanks to the presence of the garage, including skilled workers and heavy machinery. Also, the servicing of our hospital cars and ambulances is done by the garage.

There are strong synergies between the hospital technical function and the garage. For example, exploiting the two large Scania trucks as a surplus-project also provides us the opportunity of collecting large shipments of medication and medical supplies, or for example collecting a container full of donated hospital equipment that arrives in the harbour of Dar es Salaam.

Over the past years, a vocational school has been developing in Haydom, growing towards a successful institute with the strong support of Friends of Haydom Norway. This development provides us with a strategic opportunity, which we believe deserves to be explored further. There may be an opportunity to move the garage technical department to a location close to the vocational school and engage in a strategic contract with the school beneficial to both parties (providing training opportunities for them and providing low-cost and efficient garage function for the hospital).

## Guesthouse

The guesthouse generates a healthy surplus and is generally appreciated by our visitors as a comfortable place to stay with friendly and welcoming hosts and decent meals. Given this very positive role, the guesthouse as a project deserves sufficient investment. For the guesthouse to be run in a sustainable manner, part of the surplus from the guesthouse should be re-invested into the further growth of this function.

At the same time, the balance between the income-generating function of the guesthouse and the face the hospital presents to its visitors (many of whom are volunteers to our hospital and future ambassadors of Haydom) must be guarded closely. If the goal for the guesthouse would simply be to earn surplus for the hospital, prices could be raised to a commercial level. However, our many volunteers would as such be made to feel unwelcome which we want to avoid. For that reason, we try to keep prices low (but generating a surplus) and try to encourage our many visitors to contribute to our institute and Haydom as a whole in other ways, e.g. monthly donations, their human capital, ambassadorship, fundraisers, etc.

We therefore define our five-year strategy for the guesthouse as follows. The guesthouse will continue be surplus-generating whilst at the same time presenting a welcoming and affordable face of the hospital to our outside visitors, strengthening the relationships with our partners who are coming to stay at our hospital. This is expected to indirectly benefit the hospital through stronger relations with our many visitors (Tanzanian government, Norwegian representatives, Church representatives, development partners, research partners, international volunteers, etc.).

Result	When
A long-term growth/investment strategy for the guesthouse is ready and board-approved	2015
Guest satisfaction surveys show overall satisfaction of 80%	2016

## Appendix 1: HLH Monitoring and Evaluation Framework

The below shows a first draft of our monitoring and evaluation framework which will assist us in following up all the strategies and actions defined in our 5 year plan. This framework will be implemented as a monitoring and evaluation tool.

NO.	INDICATOR	INDICATOR DEFINITION	TARGET	DATA SOURCES AND COLLECTION METHOD	FREQUENCY OF DATA COLLECTION	RESPONSIBLE PERSON
<b>OBJECTIVE 1: Improvement of Management and Administrative function</b>						
1.01	Number of multi-donor strategies in place	A multi-donor strategy is in place and functioning	1, by 2015	MOU documents	Dec 31 <sup>st</sup> 2015	Hospital Administration
1.02	Number of level - 2 sustainability strategies in place	A level -2 sustainability strategy developed	1, by 2019	MOU documents	Dec 31 <sup>st</sup> 2015	Hospital Administration
1.03	Child Care Unit sustainably funded through external partners	A Child Care Unit is in place and sustainably funded through external partners	By 2019	MOU documents	Upon completion of activity	Hospital Administration
1.04	Number Organograms in use	An organogram created and used	1, by 2015	A printed Organogram	Upon completion of activity	Hospital Administration
1.05	Number of Almanacs in use	An Almanac created and used for managerial decision making	1, by 2015	A printed Almanac	Upon completion of activity	Hospital Administration
1.06	Number of Manning Plans in use	An manning plan created and used	1, by 2015	A printed Manning plan	Upon completion of activity	Hospital Administration
1.07	Number of Performance Appraisal Plans in use	An performance appraisal plan created and used	1, by 2015	A printed Performance Appraisal plan	Upon completion of activity	Hospital Administration
1.08	Number of staff recognized for good performance	Staff with good performance, long tenure at the hospital or retired recognized	By 2015	Certificates of recognition	Upon completion of activity	Hospital Administration
1.09	Number of career development policies in place	A career development policy created and in use	1, by 2015	Printed career development policy	Upon completion of activity	Hospital Administration
1.10	Number of intranets created and in use	An intranet for staff use has been created and is functioning	1, by 2015	A computer based communication tool (intranet)	Upon completion of activity	Hospital Administration
1.11	Number of computerized patient management systems in place	A computerized patient management system which generates patient billing	1, by 2015	A computer based patient management system	Upon completion of activity	Hospital Administration
1.12	Number of Asset Management systems in place	A comprehensive system for management of hospital assets is in use	1, by 2015	Asset management register	Annually	Hospital Administration
1.13	Number of staff with built capacity for self-development	Staff that have been given the opportunity to participate in refresher courses or have been offered scholarship for study	Total number of staff	Human resource records	Annually	Hospital Administration
1.14	Number of staff promoted	Staff that have been given an opportunity to advance their career internally	Total number of staff	Human resource records	Annually	Hospital Administration
1.15	Number of staff with clear and defined job	Staff that have written out and defined job descriptions		Human resource records	Annually	Hospital Administration

	descriptions					
1.16	Number of year plans in place	Carpentry, electrical and plumbing year plans finalized	By 2015	Administrative records	Dec 31 <sup>st</sup> 2015	Hospital administration
1.17	Number of policies, guidelines and manuals for internal control	Policies, guidelines and manuals for internal control in place and used	By 2016	Printed policies, guidelines and manuals on internal control	Annually	Hospital Administration
1.18	Number of internal control staff trained	Staff in the internal control department trained	By 2015	Human resource records	Dec 31 <sup>st</sup> 2015	Hospital Administration
1.19	Number of internal control reports submitted	Internal control reports compiled and submitted to management and to the board	By 2015	Printed internal control reports	Quarterly to management, Annually to the board	Hospital Administration
1.20	Number of additional staff recruited to internal control department	Additional staff recruited to the internal control department	By 2017	Human resource records	Annually	Hospital Administration
1.21	Number of public-private-partnership (PPP) service agreements signed with districts.	PPP service agreements will signed	By 2019	PPP contracts	Annually	Hospital administration
1.22	Number of qualified staff at the hospital	Staff who meet the criteria of being qualified	Total number of staff	Human resources records	Annually	Hospital Administration
<b>OBJECTIVE 2: Ensure/Further improve quality clinical services</b>						
2.01	Percentage of staff with completed performance appraisals	Number of staff with completed performance appraisals over total number of staff	100%	Human resources records	Bi-annually	Hospital Administration and Supervisors
2.02	Percent of staff completing their shift	Percentage increase in number of staff completing their shift from baseline	100%	Staff attendance register and shift roster	Quarterly	Hospital Administration
2.03	Number of reports submitted by Quality Improvement Team (QIT)	QI reports submitted	4	Quality improvement reports	Quarterly	QIT
2.04	Percent of clinical histories taken correctly	Percentage increase in number of clinical histories taken correctly from baseline	99% by 2019	Quality Improvement Team reports	Quarterly	QIT
2.05	Number of reports of baseline figures on quality level of clinical histories	Reports on baseline assessments conducted	By June 2015	QIT report on baseline	Upon completion of activity	QIT
2.06	Percent of improvement of quality level of clinical history	Percentage increase in level of quality of clinical history from baseline	99% by June 2019	Patient clinical records	Annually	QIT and clinical staff
2.07	Number of staff trained on quality improvement	Clinical staff who have been trained in QI	All clinical staff	Training reports	Quarterly	QIT
2.08	Percentage increase in ANC attendance before 16 weeks	Percentage increase in ANC attendance before from 16 weeks baseline (20%)	50% by 2019	ANC register	Monthly	Clinical staff
2.09	Percentage increase of women delivering in the hospital	Percentage increase in women delivering at the hospital from the baseline (43%)	70% by 2019	L&D register	Monthly	Clinical staff



2.10	Percentage increase in women attending at least 4 ANC visits	Percentage increase in women attending at least 4 ANC visits from the baseline (39%)	80% by 2019	ANC register	Monthly	Clinical staff
2.11	Percentage increase in post natal care (7 days)	Percentage increase from baseline for mothers (44%) and newborns (38%)	90% by 2019	L&D register	Monthly	Clinical staff
2.12	Percentage increase in health facility deliveries/skilled birth attendance	Percentage increase in health facility deliveries/skilled birth attendance from baseline (50%)	90% by 2019	L&D register	Monthly	Clinical staff
2.13	Percentage increase of males attending ANC	Percentage increase in number of males attending ANC from the baseline (3%)	20% by 2019	ANC register	Monthly	Clinical staff
2.14	Percentage increase in children receiving Penta 3 vaccinations	Percentage increase in number of children receiving Penta 3 vaccinations from the baseline (95%)	100% by 2019	RCHS records	Monthly	Clinical staff
2.15	Percentage increase in contraceptive prevalence rate	Percentage increase in contraceptive prevalence rate from the baseline (30%)	60% by 2019	RCHS records	Quarterly	Clinical staff
2.16	Percentage reduction of stunting in children	Percentage reduction of stunting in children from baseline (46%)	30% by 2019	RCHS records	Annually	Clinical staff
2.17	Percentage increase in cervical cancer catchment area coverage	Percentage increase in cervical cancer catchment area coverage from the baseline (0%)	80% by 2019	RCHS records	Annually	Clinical staff
2.18	Number of outreach facilities	Number of facilities offering outreach service	27	Administrative records	Annually	Hospital administration
2.19	Percent of health centers with an AMO	Percentage increase in number of HC with an AMO from the baseline amount	100% by 2017	Human resource records	Annually	Hospital administration
2.20	Percent increase in number of patients attending HC	Percentage increase in number of number of patients attending HC from the baseline amount	By 2018	Patient clinical records	Annually	Clinical staff
2.21	Number of health centers with doubled patient numbers	Health centers with a two-times increase in number of patients	By 2018	Patient clinical records	Annually	Clinical staff
2.22	Number of clinical specialist increased	Percentage increase in number of clinical specialist from the baseline amount	2 per department, total 21 by 2018	Human resource records	Annually	Hospital administration
2.23	Number of patients seen by a Specialist per day	An increase in number of patients seen by a specialist per day from the baseline amount (15 per day)	40 per day, by 2019	Patient clinical records	Annually	Specialist physicians
2.24	Percentage decrease in morbidity	Percentage decrease in morbidity from the baseline amount	By 2019	Patient clinical records	Annually	Clinical staff
2.25	Percentage decrease in mortality	Percentage decrease in mortality from the baseline amount	By 2019	Patient clinical records	Annually	Clinical staff
2.26	Number of patients	An increase in number of	16,640, by 2019	Patient clinical records	Annually	Specialist

	seen in specialized outpatient clinics	patients seen in specialized outpatient clinics from baseline (4,680)				physicians
2.27	Total number of patients attending the hospital	An increase in the total number of patients attending the hospital from baseline (13,757)	25,000 by 2019	Patient clinical records	Annually	Clinical staff
2.28	Number of staff dedicated to emergency care	Staff whose duties are dedicated to emergency care	By 2015	Patient clinical records	Annually	Specialist physicians
2.29	Number of SIARM machines in place	A SIARM machine is in place and used	1, by 2016	Administrative records	Upon completion of activity	Hospital Administration
2.30	Number of staff trained in emergency care	Staff who have been trained in emergency care	By 2015	Human resource records	December 31 <sup>st</sup> 2015	Hospital administration
2.31	Number of theatre nurses trained	Theatre nurses who have been trained	2, By 2016	Training reports	Annually	Hospital administration
2.32	Percentage increase in neurosurgical procedures	Percentage increase in neurosurgical procedures from the baseline amount	30% by 2017	Patient clinical records	Annually	Clinical staff
2.33	Number of AMO anaesthetists trained	AMO anaesthetists who have been trained at the hospital	1, By 2019	Training reports	Annually	Hospital administration
2.34	Number of stay days in Orthopedic ward	A decrease in number of stay days in the Orthopedic wards from baseline (24 days)	14 days by 2017	Patient clinical records	Annually	Clinical staff
2.35	Number of sterilization autoclaves	Number of sterilization autoclaves in place and functioning	2, by 2015	Administrative records	Dec 31 <sup>st</sup> 2015	Hospital Administration
2.36	Number of “stainless environment” theatres	A theatre qualified as a “stainless environment”	1, by 2019	SOPs, Guidelines and standards, checklist	Upon completion of activity	Hospital administration
2.37	Number of laparoscopic surgeries performed	Total laparoscopic surgeries performed	By 2019	Patient clinical records	Annually	Clinical staff
2.38	Number of ICU staff surveys done	Staff surveys completed as baseline	By 2015	Baseline Survey report	Dec 31 <sup>st</sup> 2015	Hospital administration
2.39	Percentage increase in ICU staff morale	Percentage increase in ICU staff morale from the baseline amount	20%, by 2016	Follow up survey report	Annually	Hospital administration
2.40	Percentage decrease in number of stay-days	Percentage decrease in number of stay-days from the baseline (3.46 days)	25%, by 2016	Baseline survey report/follow up survey report	Annually	Hospital administration
2.41	Percentage decrease in mortality at ICU	Percentage decrease in mortality at the ICU from the baseline (19.4%)	25%, by 2016	Baseline survey report/follow up survey report	Annually	Hospital administration
2.42	Number of nurses trained in ICU care	Nurses trained in ICU care	All ICU nurses, by 2017	Training reports	Annually	Hospital administration
2.43	Number of bilateral exchange programs in place	Established bilateral exchange programs	By 2017	Printed documentation on bilateral exchange program	Annually	Hospital administration
2.44	Number of beds with working patient monitor and ventilator	Beds with working patient monitor and ventilator	By 2019	Inventory checklist	Annually	Hospital administration
2.45	Number of “stainless environment” ICUs	An ICU qualified as a “stainless environment”	1, by 2019	SOPs, Guidelines and standards, checklist	Upon completion of activity	Hospital administration
2.46	Number of pediatric	Pediatric ICU Ward rounds	2, by 2015	Pediatric ICU patient	Dec 31 <sup>st</sup> 2015	Clinical staff

	ICU ward rounds per day	conducted each day		ward records		
2.47	Number of neonatal rooms operational	Operational neonatal rooms	2, by 2015	Administrative records	Dec 31 <sup>st</sup> 2015	Clinical staff
2.48	Number of pediatric ward rounds per day	Pediatric Ward rounds conducted each day	2, by 2019	Pediatric patient ward records	Annually	Clinical staff
2.49	Percentage decrease in neonatal deaths	Percentage decrease in number of neonatal deaths from baseline	25% by 2019	Patient records	Annually	Clinical staff
2.50	Percentage decrease in under-5 deaths	Percentage decrease in number of under- 5 deaths from baseline	25% by 2019	Patient records	Annually	Clinical staff
2.51	Number of separate operating theatres for maternity	An established separate operating theatre for maternity	By 2015	Administrative records	Dec 31 <sup>st</sup> 2015	Hospital administration
2.52	Percentage decrease in perinatal death-rate	Percentage decrease in number of perinatal deaths from baseline	25% by 2019	Patient records	Annually	Clinical staff
2.53	Percentage decrease in maternal death-rate	Percentage decrease in number of maternal deaths from baseline	25% by 2019	Patient records	Annually	Clinical staff
2.54	Number of women screened for cervical cancer	Total women screened	Doubles from baseline, by 2019	Clinic records, RCHS	Annually	Clinical staff
2.55	Number of women treated for cervical cancer	Total women treated	Doubles from baseline, by 2019	Clinic records, RCHS	Annually	Clinical staff
2.56	Percentage increase in TB patients treated as outpatients	Percentage increase in TB patients treated as outpatients from the baseline amount	90% by 2016	Patient records	Annually	Clinical staff
2.57	Number of psychologists at the hospital	A psychologist practicing at the hospital	1, by 2015	Human resource records	Dec 31 <sup>st</sup> 2015	Hospital Administration
2.58	Number of nurses sent to SSHF Norway for capacity building	Nurses sent to SSHF Norway for capacity building	2, by 2017	Human resource records	Annually	Hospital Administration
2.59	Number of pilots of preventive mental health programs through reducing child abuse	A pilot of preventive mental health programs through reducing child abuse conducted	1, by 2018	Pilot report	Upon completion of pilot	Clinical staff
2.60	Number of RCHS clinics with mental health care implemented	An RCHS clinic with mental health care implemented	1, by 2018	Clinic records, RCHS	Annually	Clinical staff
2.61	Number of stars accredited to main laboratory.	A lab operating in the hospital with 4 star accreditation	1, by 2019	SOPs, Guideline and checklists	Annually	Hospital Administration
2.62	Number of pharmacists trained	Hospital pharmacists who have been sent to receive training	3, by 2016	Training reports/human resource records	Annually	Hospital administration
2.63	Number of pharmacist technicians recruited	Pharmacists who have been recruited by the hospital	4, by 2016	Training reports/human resource records	Annually	Hospital administration
2.64	Number of ambulance analysis carried out and actions taken	An analysis done on ambulance movement, results lead to actions	By 2016	Analysis report, human resources report, financial report	Upon completion of activity	Hospital administration

2.65	Number of laundry technicians recruited	Laundry technicians hired by the hospital	4, by 2017	Human resource records	annually	Hospital administration
<b>OBJECTIVE 3: Development of a Training Institute</b>						
3.01	Number of Laboratory Technical schools	A laboratory technical school (diploma level) established	1, by 2016	BOQ, Administrative records, financial records	Upon completion of activity	Hospital Administration
3.02	Number of Pharmacy Technician schools	A pharmacy technician school (diploma level) established	1, by 2016	BOQ, Administrative records, financial records	Upon completion of activity	Hospital Administration
3.03	Number of physiotherapy schools	A physiotherapy school established	1, by 2019	BOQ, Administrative records, financial records	Upon completion of activity	Hospital Administration
3.04	Number of clinical officer schools	A clinical officer school (diploma level) established	1, by 2016	BOQ, Administrative records, financial records	Upon completion of activity	Hospital Administration
3.05	Number of Dental Technician school	A Dental technical school established	1, by 2019	BOQ, Administrative records, financial records	Upon completion of activity	Hospital Administration
3.06	Number of plans for construction of student hostel	A plan for construction of student hostel is in place	1, by 2019	Printed plan for construction of student hostel	Upon completion of activity	Hospital Administration
3.07	Number of plans for establishing Bachelor in clinical medicine	A plan for establishing Bachelor in clinical medicine is in place	1, by 2019	Curriculum	Upon completion of activity	Hospital Administration
3.08	Achievement of Teaching Hospital Status	The hospital is certified as a Teaching Hospital	By 2017	Certificates	Upon completion of activity	Hospital Administration
<b>OBJECTIVE 4: Further development of Research functions</b>						
4.01	Number of data management and statistical analysis systems in place	A data management and statistical analysis system is in place and in use	1, by 2015	A computerized data management system, statistical software	Dec 31 <sup>st</sup> 2015	Hospital Administration
4.02	Number of research questions developed and published	Research questions developed and published on hospital website	By 2015	A hospital website with published research questions	Dec 31 <sup>st</sup> 2015	Hospital Administration
4.03	Number of international experts invited	International experts involved in large research invited to the hospital	By 2015	Invitation and acceptance letters	Dec 31 <sup>st</sup> 2015	Hospital Administration
4.04	Number of institutions having a partnership with	Institutions that have a partnership with the hospital in carrying out research activities	Total number of Institutions	Contractual agreements	Upon completion of the activity	Hospital administration
4.05	Number of research policies	A research policy in place	1	Policy document	Upon completion of the activity	Hospital administration
4.06	Research activities in progress	Proposed research activities have received NIMR approval (where applicable) and are in process of being implemented		NIMR approval letters	Annually	Clinical staff and M&E/data management staff
4.07	Peer review manuscripts developed	Topics for peer review manuscripts have been selected and papers have been written and submitted to journals	% increase in number of publications made in international journals	Manuscript drafts	Annually	Clinical staff and M&E/data management staff
4.08	Abstracts submitted to international and national	Abstracts have been developed and submitted to national and		Abstract drafts	Annually	Clinical staff and M&E/data management

	conferences	international meetings – and presented when accepted				staff
4.09	Number of personnel identified and capacitated in research function.	Person identified, capacitated for future sustainability and growth of hospital research functions	By 2015	Human Resource records, capacity building reports	Dec 31 <sup>st</sup> 2015	Hospital Administration