

Nkoaranga Hospital Final Report

Applied Global Business Learning Program
Marquette University

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GLOBAL BUSINESS LEARNING**

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Final Engagement Report with the Nkoaranga Hospital

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Our Mission

It is the Mission of Applied Global Business Learning (AGBL) to provide comprehensive financial and business advice to worthy enterprises from across the world. In so doing, we seek to implement and further our education in the service and advancement of others. Additionally, these intentions fall under the greater Marquette University values, which AGBL proudly represents. Such values include: The discovery and sharing of knowledge, the fostering of personal and professional excellence, the development of leadership expressed in service to others, all for the greater glory of God and the common benefit of the human community.

In specific reference to the present partnership with the Nkoaranga Hospital, AGBL's mission was to provide insight and aid to the Hospital with the goal of advancing its business function and expertise, and thereby its capacity to successfully operate into the future.

Executive Summary

First, it is important to note that the personnel were widely qualified to perform their required duties at the hospital. We noticed from our field research in the street that the quality in service has increased since Tanya and the new staff began in the past couple of years. Having said that, it is important to identify some of the key aspects that make Nkoaranga hospital potentially attractive to people within the community. First, the hospital has a reputation for Orthopedic surgery; it is essential to maintain that positive reputation. Second, the hospital has a positive perception with service overall. People prefer to go to Nkoaranga if they could because they claim the service provided is superior to the one provided by the public health centers. However, the negative perception problem comes when price enters in the equation. Nkoaranga offers a better



service but it's too expensive compared to the government hospitals. This perception, however, is not true, since we visited government hospitals to compare the prices of opening a file in both places and realized that Nkoaranga prices compares to the public hospitals. To fix this inaccurate perception, we suggest several solutions discussed later.

Our investigation shows that there is a need to increase the patient load to have a broader source of revenue, but this cannot be done if the hospital is understaffed or there is not a precise process of data collection in the hospital. In order to achieve this goal, we will discuss several findings and possible solutions or steps that could be taken for the hospital to improve its financial and procedural processes.

Project Objectives

In this report, you will find a discussion on the following:

1. Accounting: Recommendation for additional categories in classifications to improve and increase financial data sources within the hospital.
2. Pharmaceutical and Lab orders: Suggestions to improve the ordering of medicines that will allow for saving in that area.
3. General Patient Practices: Identification of a better accounting of inpatient and outpatient data, along with the classifying of female, male, age groups, and patient fluctuations at different points of the year.
4. QuickBooks: Recommendations of how to apply QuickBooks to make organization and financial processes more efficient
5. Public Perception: We will recommend a couple of initial ideas to work with the community to improve the hospital's price perception

Accounting

The main purpose of the accounting team was to: analyze the financial processes that the hospital had in place, observe how information flowed and was managed and its flow into the hospital's financial statements, and deliver supportive feedback. Our team initiated this process by meeting with the accounting department to familiarize ourselves with their financial statements, examine at some of their accounts, and to also observe how the accounting manager (Amani) utilized various functions in the QuickBooks software. It was noted that regarding the financial statements, various income and expense types could have been classified differently, split up, or classified by income or expense type. Because both revenues and expenses could have been classified in more effective manner, it was difficult for the hospital's accounting department to trace where funds were being generated and spent. Similar to the Profit and Loss statement (P&L), it was also found that the balance sheet did not contain the main accounting classifications; consequently, instead of the balance sheet being grouped together by the major account, information was just listed, and not organized effectively. Therefore, there was a lack of classification amongst the balance sheet and profit and loss statement.

After investigating into the financials, the accounting team began to explore the functionality of QuickBooks to understand in what manner the accounting department documented information. We found a noteworthy lack of documentation for patient invoicing, patient information, and tracking revenues and expenses on a subsidiary level to focus on the dispensaries. For example, for one particular patient file, there was merely an invoice number and a total service charge balance of the customer. Using QuickBooks, the actual procedure (indicating the actual procedure, the costs associated with that patient, and if they received payment, date of visitation,

number, etc.) could have been documented. Hence, all the patient's information from their hospital visit should have been entered in the computer for the invoice. Although documenting this information takes more time and effort, it makes patient information readily available; Making these changes will result in better expense management/tracking.

Moreover, the accounting department could take advantage of the countless functions in QuickBooks that can better track patient information and other expenses including: patient expenses, administrative expenses, and dispensary expenses. Interesting enough, the accounting department is not the only department that would benefit from implementing QuickBooks hospital-wide. The market for QuickBooks is smaller to mid-sized organizations, and if utilized effectively, this software can be integrated in all the hospital's departments, thereby centralizing medical records and essential information. With implementation of hospital-wide QuickBooks, this will not only create better usage of the software, but the hospital would operate better, have more accurate financial statements and the usage of administrative manual labor would decrease.

After the reviewing of findings, it is suggested that the accounting department takes a direct tracing cost approach. This approach would require that documentation be more detailed down to the transaction, and better usage of QuickBooks. For example, the costs associated with a patient receiving medical care should be itemized in QuickBooks, not manually written on a sheet of paper, and stored in cabinets. Summing the itemized expenses shows the total cost of the services rendered. As stated before, itemization of costs not only assists in better billing, but it accurately documents transactions and costs in QuickBooks, which can be directly inputted into the Financial statements.

In regards to the actual financial statements (both P&L and balance sheet), it is recommended that the accounting department consider re-organizing and re-classifying accounts

to get a better picture of the activity and the flow of funds. Below, in the next exhibit, a recommended reorganization of the statements is inserted.

Improper classification can make it hard to visualize the flow of funds, and makes it difficult to identify opportunities for reallocation of funds, and subsequent areas for improvement. Therefore, by going through each line item of the P&L statement, similar income sources and expenses were grouped by category and subcategories. For example, beginning with income sources, sources were grouped into three categories: governmental funds, hospital income and other income. Hospital income was broken down into two categories: inpatient income and outpatient income. Keeping these two categories separate would allow users to visualize revenues from inpatients versus outpatients.

In addition to income types, various categories were developed to group similar expenses together. For example, the “Hospital expenses” category was created because there were many hospital related expenses on the P&L. Under this category, there were many subcategories, such as electricity and medical supplies. As it can be shown in the example provided, under electricity, there is a line item for electricity bill and repairs and maintenance. The next line item was a total line for electricity costs, this method makes it easier to track expenses and better budget forecasting for the next fiscal year.

It is also recommended that expenses be broken down by department. By characterizing expenses by department, and if most expenses are constant each year, these amounts can be factored into the next FY budget. Our decision with the accounting department, found that budgeting was unstable year to year. With better characterization by both expenses and department, this change will help in future budgeting.

In regards to the dispensaries, the accounting department currently classifies expenses by the dispensary, which allows users to see which dispensary is consuming resources and which are costlier. However, to better track the expenses and to look at each dispensary holistically, there needs to be uniformity regarding using the same category of revenues and expenses per dispensary. For example, if salary and electricity is an expense listed under the Khatiti dispensary, this should also be listed in the Penal dispensary as well. This uniformity creates consistency among the dispensaries and allows users of this information to make comparative analytics on each dispensary and its performance. In not using the same expenses and revenue categories for each dispensary, it makes it more challenging to complete a comparison. This is another method to implement the direct-cost tracing approach. Resulting in more detail to create more informed decisions.

The accounting department is doing an excellent job accounting for items on the balance sheet, but with a few changes the information they prepare will allow them to more effective. The current arrangement of the balance sheet makes it difficult to identify what total assets, liabilities and equity are.

Starting with assets, we recommend putting all current and long-term assets under one heading. This will make it easier for users to read and involves minimal extra work since the accounting department has already computed the numbers. Under current assets, we combined all bank accounts into one line item called “Cash.” Creating one cash line item allows readers to understand the cash position of the hospital without having to add all the bank accounts together. In addition, a more detailed cash position statement could be created and that would show the balances of the bank accounts. Within current assets we added a new line item called “Inventory” with two sub categories called “Drugs” and “Medical Supplies.” Inventory is an important category to keep track of and should be reported on the balance sheet because it is an asset to the

hospital, but it is also a way to keep track of medical supplies and pharmaceutical levels. With the installation of a computer and QuickBooks in the Pharmacy Department, it would be much easier to account for pharmaceutical inventory. As, with pharmaceuticals, medical supplies should also be accounted for under inventory.

According to the hospital's 2015 balance sheet, "Salary Advances" are negative but listed as a current asset. If the current balance of salary advances is negative, we recommend that it should be classified as a liability. Doing this change will ensure that readers do not confuse it as an asset.

We recommend changing "Fixed Assets" to "Long-Term Assets" because we added the line item "Equipment" and that would not be classified as a fixed asset. The numbers for buildings and land would stay the same. Creating the equipment line allows the hospital to account for assets like an X-Ray machine or lab equipment.

Pharmaceutical and Lab Orders

One of the major areas that we identified as a place for improvement was the procurement process, specifically those related to pharmaceuticals and medical supplies. In order to fully understand the operational procedures related to these categories, we felt it was necessary to interview and observe hospital staff related to these fields. To provide a complete analysis of the issues related to procurement, we first report our immediate findings and then our recommendations. After interviewing and speaking with hospital staff in the pharmaceutical, procurement and laboratory departments, we found that drugs and medical supplies were ordered monthly on a single invoice, to ensure access to the drugs needed to combat prevalent illnesses

during that month, and laboratory items were recently switched to quarterly ordering. In addition to this, drugs that are in high demand, such as ibuprofen, were ordered every month in large quantities. The record keeping system employed for tracking inflows and outflows of pharmaceuticals are bin cards, with master books for inpatient, outpatient and medical supplies. We were also informed that the hospital predominantly does business through two vendors, and the hospital's procurement officer is the main point of contact with these vendors. Lastly, we learned that one of the major operations that proved detrimental to the business aspect of pharmaceuticals were the hospital operated dispensaries.

After collecting and examining this information, we concluded the following: pharmaceutical purchasing process needs to be altered; that the dispensary and procurement management needs to employ better record keeping; and there needs to be increased transparency between the procurement office and accounting department. The current pharmaceutical purchasing process seems to operate efficiently at the hospital. However, we believe that ordering specific drugs quarterly, instead of monthly, can help the hospital secure these medications at a lower price that will allow greater variety and quantity when purchasing drugs the hospital needs monthly.

In addition, the use of QuickBooks software to track and notify staff regarding incoming and outgoing drug orders will help the hospital identify which drugs are needed at each dispensary and which drugs are likely to go unused at these locations. By identifying these drugs, the procurement office can work to limit the amount of waste and lost profits associated with the inability to sell these prescriptions. We also believe that medical supplies and pharmaceuticals should be ordered separately. Since the shelf life on medical supplies is often greater than that of pharmaceuticals, we think by ordering this equipment quarterly, the hospital can better track its

expenditures and reduce its medical supply costs exponentially. In addition, QuickBooks software will coordinate records in a single system that will allow easy communication between the procurement and accounting departments to better track cash inflows and outflows.

General Patient Practices

1. Data

Data collection is essential for hospitals to work efficiently and effectively. We understand all the problems regarding fundraising to buy and utilize a centralized source of data collection, however we think that it will be a positive investment. First, when we collected the different books that contained records, we found that that there were some discrepancies among the books in the records office and the accounting books from previous patients. Additionally, there is an overload of books that make it confusing to aggregate numbers on monthly inpatients and outpatients. We recognize recent efforts to quantify data more effectively by having a manual count of inpatients and outpatients. We believe that with QuickBooks implementation it will be possible along with the accounting department to coordinate data with money flow.

A great part of our efforts was focused on reconciling data from different books, including the specific monthly patient info, and the larger inpatient outpatient diagnosis books. However, after calculating both sets of books, we discovered differences in numbers and errors in computation by hand. Thus, we recommend implementing a computerized system that could unify accounting and the records office. It is very important for the staff in records and reception to keep detailed track of patients. Moreover, we recommend a weekly check on data collection by any of the Department directors in order to ensure that data is up to date and accurate.

2. Communication

Since the moment, the team arrived to the hospital and met with the staff it was clear that everyone knew what they did. They all knew what their job consists off and how they have to manage that job. However, when it came to explaining interdepartmental work, weather it was procurement with lab or pharmacists with lab there was a discrepancy on who does what specifically. Thus, we believe that it is important to improve the meetings between departments. It is important for all the staff to be up to date on what each other does. The system we came up with is one where Tanya will receive topics from the different departments beforehand; she will determine the relevance of these topics and run the meetings with a specific amount of time allocated into each topic. Moreover, it is fundamental that each department communicates within themselves. Thus, we recommend a biweekly meeting among each department in order to communicate different issues that relate weather processes or team relations.

It is important for the whole hospital to be on the same page in terms of information. For example, if there is a problem with inpatient recordings and pharmaceutical inventory the meetings will help to correct the discrepancies in data. Moreover, it is important for Amani especially to have all the departments on the same page. Many times, he is looking at books from different places and that can create confusion, but if there is a unified list of information then Amani's job can be done in a more efficient way.

QuickBooks

One of our key findings was that QuickBooks would be an effective way to organize data in the hospital. Through the use of QuickBooks, Nkoaranga hospital will be able to keep track of patients, financial records, and various aspects of procurement for the pharmacy.



Keeping track of patients can be done in data collection. Here the hospital can enter the customer's name, gender, age, and what treatment was done or needed. By keeping track of the treatments required for each patient, the hospital will be able to keep better track of who has and has not paid. This change is essential for the financial record keeping of Nkoaranga, because they will be able to identify customers who have not paid, or keep track of patients who cannot pay.

When the hospital receives payment from patients, the transaction will be recorded in QuickBooks, and an adjustment will be automatically made to the income statement and balance sheet. This will help the accounting team with keeping track of money received, and make the accounting statements more accurate.

Finally, using QuickBooks will help the procurement team with purchasing drugs for the pharmacy. QuickBooks will allow the user to make a purchase order for the supplier, and track it all the way until the drugs are received. Also, QuickBooks will keep track of payments made to suppliers, and previous quantities of drugs ordered. Keeping track of past purchase orders will help make the pharmacy run more efficiently and effectively, since they can make comparison to prior months to see how many drugs are needed.

Overall, QuickBooks will allow Nkoaranga hospital to be more efficient, and have better documentation of records.

Public Perception

Over the course of our work with Nkoaranga it became apparent that in addition to understanding the Hospital's internal operations, understanding the motivations and perceptions of its clientele was also necessary to improve its business services and pricing. For example, we

recognized that inpatient care, that department which, according to Tanya, generates more financial losses than any other, could limit its deficit by increasing its capacity usage [Currently only 60% of IPD beds are occupied]. Doing so would enable revenue growth as well as better discernment between paying and non-paying patients - but is requisite upon understanding and altering the mindset of the Hospital's potential-patients. More specifically, if the volume of patients at Nkoaranga is low because they are in some way dissuaded from attending, recognizing that dissuasion and subsequently working toward a change in perception is essential to solidifying the long-term solvency of IPD, and by result, the hospital at large.

In order to understand the community perspectives, we surveyed individuals within the Hospital's geographic service area on their perceptions of Nkoaranga Hospital, and whether they themselves would seek treatment there. Before continuing with our results, it is important to make clear that this survey lacked the proper qualifications to be considered scientific - in that, it was without the large sample size, participant randomization, and question consistency required of academic data, and should not be considered as such. Since there were obvious trends in the collected opinions, we feel entirely comfortable in drawing a number of brief conclusions from our data. These are:

- First, Leganga and Meru Medical Centers are Nkoaranga's most direct competition.
- Second, most people believe that Nkoaranga provides better services than either of the above competitors. (Anecdotally, many felt that wait times were shorter, and employees were kinder at Nkoaranga)
- Finally, most individuals feel that Nkoaranga is too expensive to attend, and thereby frequently choose admittance at either Leganga or Meru instead.

Having learned, in the broadest sense, the perceptions of Nkoaranga's client base, we then set about evaluating the accuracy of such opinions by visiting the government medical centers, and comparing their treatment and service costs to Nkoaranga. In relation to treatment, it was apparent that the facilities and cleanliness of the government centers were of lower standards than Nkoaranga. And though we could not directly compare medical care, as we lacked physician expertise, it seemed evident that Nkoaranga was better able to treat its patients.

Therefore, public perceptions appear to accurately mirror reality in regards to service quality. In relation to costs, on the other hand, a cursory comparison of prices showed that Nkoaranga is not more expensive than Leganga and Meru. In fact, for several generic services Nkoaranga charges less than its competition. For instance, opening a file at a government health center costs 7,500 Tanzanian Shillings, while doing the same costs only 5,000 Shillings at Nkoaranga. In that way, the perception that Nkoaranga is too expensive when compared to its competition is, at least for the average patient, wholly false. Accordingly, it should be the goal of Nkoaranga to alter the public impressions of expense so that they better reflect reality, whilst maintaining the accurate understanding of its superior treatment. In turn, such alterations should contribute to an increased patient load, and therefore better business.

We have a few suggestions as to how to achieve such changes in perception. These include:

1. General Marketing Campaign

- Advertise the hospital's lower prices and better service.

2. Targeted community outreach.

- Provide pop-up medical treatments in and around the local area

- Goal is to build a community, establish long term clientele, and to publicize the superior services while informing about lower prices
- Could be in conjunction with other the Lutheran Diocese projects

3. Creation of a Hospital webpage

- A straightforward publication of the Hospital's mission, along with certain aspects of its services and their prices may help encourage potential patients to choose Nkoaranga over its competitors, and will, at the very least, aid in informing international volunteers and agencies about the Hospital.
- AGBL would be happy to work with Nkoaranga and Marquette University to create the best possible webpage for the lowest possible cost.

4. Don't ask people to leave - yet

- Over the course of our conversations with Nkoaranga staff, the question was posed as to whether the Hospital should ask non-paying inpatients to leave, and if so, at what point should that request occur.
- We feel that because there currently aren't enough patients to take the place of those forced out, that the hospital should refrain from asking IPs to leave. This is because there is little potential to increase revenue by evicting a non-paying patient, but a real potential that doing so will advance the perception that Nkoaranga is unaffordable, thereby decreasing future patient growth.
- However, once patient levels increase to where there is more demand than there are beds, the question of asking non-paying patients to leave should be reevaluated.

We understand that the above strategies are not yet fully developed, however, we are optimistic about their ability to aid the hospital. Furthermore, we believe that advancing such idea-development would be an ideal task for a future AGBL trip. Such a group could more thoroughly outline, and potentially even implement, a specific marketing program for Nkoaranga to drive up its demand. Increasing patient load is an avenue that can provide financial stability, and as a result, lead to the advancement of hospital services, staffing, and treatment. Accordingly, we strongly recommend that patient acquisition be a preeminent focus Nkoaranga going forward.

Conclusion

After visiting the Nkoaranga Hospital and conducting our review, we discovered there were several areas for improvement despite the qualifications of the staff. Specifically, the areas of data collection, communication, public perception and accounting. Based off our interviews and observations, we made several recommendations to improve these procedures and ultimately, increase the efficiency and the number of patients the hospital sees. With regard to data collection, we noticed that the number of books used to keep records was excessive and disorganized, often times containing mathematical errors or lacking full information. Our review of the communication practices of departments and senior hospital staff also prompted us to propose bi-weekly meetings within departments to improve communication. We also suggested the senior hospital staff meet once a month, with a topic outline shared with all attendees prior to the start of the meeting.

The public perception of the hospital is crucial to the further advancement and success of its operations. The challenges facing the hospital's perception must be met through a variety of

means including a marketing campaign, with a focus on targeting specific community members. Additionally, a hospital webpage and refraining from asking people to leave as we fear this will drastically affect Nkoaranga's ability to connect with the local community.

Our accounting team developed a mock excel sheet to help explain the importance of expanding departmental classification so the accounting department can better assess areas where the hospital is losing and making money.

In addition, the implementation of QuickBooks software will centralize data collection to make the monitoring of these areas more efficient. QuickBooks will also centralize expenditures to improve the abilities of the accounting department to update its excel sheet. We appreciate you taking time to provide us with the necessary information to complete our review. We hope that you see our suggestions as beneficial and begin their implementation to improve the lives of your community members. It was a pleasure working with all of you and we hope to continue the relationship between our two great institutions.