<u>Report On</u>

The procurement process & supply chain management of Apollo Imperial Hospitals (AIH), & the impacts of these on the health care service of Apollo Imperial Hospitals Chattogram.

<u>Submitted By</u>

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A Practicum Report Submitted to the BRAC Institute of Governance & Development to fulfill the partial requirement of the degree "Masters in Procurement & Supply Management".

BRAC Institute of Governance & Development (BIGD)

BRAC UNIVERSITY

Summar-22

Date, BRAC UNIVERSITY

Declaration:

It is hereby declared that -

1. The practicum report submitted with my own practical work experience while completing the degree at BRAC University.

2. This report does not contain material previously published or written by a third party, except where this is appropriately cited through full and accurate referencing.

3. The report does not contain material that has been accepted, or submitted, for any other degree or diploma at any university or other institution.

4. I have acknowledged all main sources of help.

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LETTER OF TRANSMITTAL

Shah Eyamin Ul Islam

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Sub: Letter of Transmittal

Dear Respected Sir,

I would like to express my heartiest pleasure that I completed the hardship report on "Procurement Process of Apollo Imperial Hospitals LTD". & able to hand over the same to you. The report is the outcome of my knowledge which has been gathered from relative courses.

I tried my heart and soul to complete the report in time and make it the best. The maximum information in the report is based on my practical job experience at Apollo Imperial Hospital. Besides, I also collected some information through face-to-face consultation with some senior personnel of Apollo Imperial Hospital. Finally, I also collected some company information from the website of the company through the internet.

Hope you will appreciate my hard work excuse me for the minor error. If you need any further clarification or have any queries please feel free to ask me. Thank you in advance for your kind cooperation.

Sincerely

Kowshic Chowdhury

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NON DISCLOSURE AGREEMENT

Pharmacy In-charge

Pharmacy Dept. & Responsible for procurement.

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Zakir Hossain Road, Chattagram

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Sub: Non- disclosure agreement

Dear Respected Sir,

It is my heartiest pleasure to inform you that I have collected the required data and information from the respective sources as you advised. Subsequently, I have completed my thesis-based report.

Therefore I would like to assure you that neither I nor BRAC University won't disclose this confidential information of the company that I have collected for preparing this report to any other media or entity.

The said confidential information will be kept fully safe and secured under the university's authority. Hope that the report will serve the standard as desired.

Yours truly

Kowshic Chowdhury

MTO- Procurement.

EID-1739

LETTER OF ACKNOWLEDGEMENT

This is integral to preparing a report on the designated or allocated topic for the fulfillment of the MPSM course. As a student of the course of MPSM, I also attached my report on "Procurement Process of Apollo Imperial Hospital Chattagram" which is given by BRAC University.

First of all, I would like to give my deepest heart thanks to my almighty God for enabling me to complete the report successfully. Secondly, I would like to express my heartiest gratitude and thankfulness to my academic supervisor Shah Eyamin Ul Islam, Faculty, MPSM, BIGD, BRAC University, for his continuous and treasured support in preparing this report. Thirdly I would like to express my deepest gratitude and heartiest thankfulness to my organizational supervisor Mr. Forhad Islam, Pharmacy In-charge, for his valuable support in preparing the said report.

Then it is also required to give many thanks to my office seniors who freely offered their sincere advice to prepare the report. I also need to offer my heartiest gratitude to my colleagues who eagerly gave me all the required information whenever I asked them without any hesitation or counter-question. It was a great and valuable opportunity for me.

EXECUTIVE SUMMARY

Bangladesh is a densely populated country; more than 180 million people live within this geographically small country. That is why there is a natural scarcity of modern healthcare facilities in the country. Every year a significant number of people go abroad for modern & advanced treatment. Because of this, a huge amount of currency is going abroad from Bangladesh. To provide proper & efficient health care service to fellow countrymen the Bangladeshi health sector is growing rapidly. Now-a-days, Bangladesh has developed a lot d in some special health care sectors like cardiac surgery & various heart diseases, renal failure etc. A number of specialized hospitals with modern treatment facilities have been established in the last few years in Bangladesh.

This practicum report is based on the procurement process, & supply chain management of Apollo Imperial Hospitals, & the impacts of these on the health care service of Apollo Imperial Hospitals Chattogram. Procurement is the core activity of supply chain management, which has the responsibility to source, & procure the medical, & non-medical goods, machinery, Bed, etc. as per organizational policy, where cost, quality, & lead time, after-sales or installation service from vendors, etc. are the core factors. A brief organizational overview of Apollo Imperial Hospitals with a short introduction, history, mission, consumer, services, etc. is described here in this report.

In this practicum report the processes, tools, techniques, mechanisms of the procurement, & supply chain are included. Supplier relationship management has also been included in this report to signify its importance in modern days' supply chain.

Table of Contents:

Chapter-1

Organizational Overview

1. Introduction:

   In Bangladesh, the healthcare sector is a very important sector prioritized by the Government of Bangladesh to improve the healthcare service to keep the currency here in Bangladesh. Because every year a vast quantity of our population who are solvent economy go abroad for better treatment of several diseases, on the other hand, the insolvent people can't ensure proper treatment. The Apollo Imperial Hospital is a health care service provider in Bangladesh that provides international quality treatment here in Bangladesh with world-class treatment procedures. From this aspect, Apollo Imperial Hospital is aligning with the government's target of health care service, & besides this creating a meaningful job opportunity in Bangladesh.

2. History of Apollo Imperial Hospital:

   The construction of this AIH started in 2015, with the direct fund, & supervision of the Chittagong Eye Infirmary, & Training Board Trust, & the fund invested by the World Bank. The authority has signed a contract with an Austrian-based healthcare consultancy group "Vamed Engineering GmbH & Co KG for construction", & IHL's design and drawings prepared by United States-based healthcare architectural and engineering consultant firm "Kaplan McLaughlin Diaz (KMD)".

3. Medical Facility:

   With international level advanced medical equipment, are spread out with a 66000 square feet floor area. There are 375 beds in five interconnected buildings. Besides these, the hospital has 88 single cabins, 76 double cabins, and 14 modular operating theaters. 16 nurse stations, 62 consulting rooms with the out-patient department facilities, 64 critical care beds, 44 beds for newborns, a Neonatal intensive care unit with 44 beds, and eight pediatric intensive care units (ICU).

4. Impact of Procurement on the Service of AIH Hospital service: The Hospital's main instrument is patient service, & proper treatment. For this reason, a smooth procurement service is fundamental. Here in the AIH patient service procurement has a great impact because the procurement team needs to keep the supply of goods required by the several user departments despite different vulnerabilities in the market. Always the procurement team keeps the issue in consideration of the urgency

of goods like lifesaving medicines, consumable disposable & medical goods, etc. when we are going forward with the sourcing & procuring of the items. In these ways, the procurement team keeps an impact on the overall operational smoothness of AIH. Besides this the financial impact of procurement is the products or goods or services are procured at comparatively lower prices can contribute to the revenue earning of AIH as well.

Chapter-2

Key Factors of AIH Procurement

a) The targeted goals- Procurement is the cost-generating or cost-saving department here. We believe if we procure cost-effectively then the organization's cost will be controlled in a portion. That means cost saving is a goal of procurement, the other goals are short lead time, At least three suppliers for every item without the exceptional like some medicines, and Strategically decreasing procurement quantity at a time for the best turnover of inventory about which discussion will take place later.

b) Strategic procurement is the factor of sourcing that ensures the right products at the right time with proper cost-saving targets. This is especially applicable for the critical items related directly to patient service, treatment, surgery, etc.,& which are the most cost-generating items in the hospital, because a bulk amount in the warehouse of these items makes or generates an excessive cost at the end of the inventory counting period. On the other hand absence of these items at the required time can cause a severe hamper of the patient service. So that we keep our focus on strategic procurement.

c) Extensive supplier management- This is the key factor of AIH procurement or supply chain management where we believe, that a sound & cooperative relationship between us and our suppliers is the key to our smooth procurement system. Here commitment & fairness of our procuring entity & also finance about smooth & on-time payment to our suppliers, & the smooth delivery of products & services to us are base of our supplier relationship management. About which description will take place later.

d) Proper risk management: We need to manage our risks in our supply chain & procurement. Here we consider the political situation and type of the various concerned items like critical items, availability of products, inflation rate, etc. to manage supply or supplier disruption proactively.

e) Adoption of technology: This is the key factor because more adoption of proper technology in proper time gives us smoothness in our overall system, saves our time, & increases efficiency.

f) Collaboration with other related departments: Our procurement team works in collaboration with other concerned departments like Warehouse, Finance & Accounts, etc. Because the inventory management system is properly maintained here, & both procurement & store work collaboratively in this issue of "Less inventory more service". The store department submits gross requirements & also the procurement department gives input their valuable opinion very son about the market condition, Availability of products, etc. Besides this, the Procurement team collaborates with the Finance team about the smooth & on-time payment or strategic payment for a sound Vendor Relationship Management. The other concerned departments are doctor stations, nurses, technicians, etc. with whom procurement needs to collaborate for product or service specification. We believe that without a proper collaboration among the concerned departments SCM or Procurement can't be efficient by itself only. If for example, the Store gives us (the procurement department) the central requisition without any concern of the procurement department smooth supply of products can be disrupted at any time, & if strategic payment (payment based on credit period, credit terms, vendor type, a negotiated commitment by procurement about the transaction, etc.) won't be placed on time vendor relationship will be hampered.

g) The Three Ps procurement of AIH:

<u>1. Person:</u> The trained & skilled persons in the procurement are working with their efficiency to improve the process day by day, & to keep the procurement smooth, & efficient very well.
<u>2. Process:</u> This is the process of receiving the requisition, reviewing, ordering properly, obtaining or receiving (Store issue), & paying on time for goods or services (Finance issue). This process is a chain that is fundamental for an effective procurement.
<u>3. Paperwork:</u> There are several pieces of paperwork here Like preparing bills for payments with several documents like purchase requisition, comparative statements/price quotations, purchase orders, goods receiving notes(from the Store), product challan with store verification, payment request form, Comparative statement preparation, etc. This is a cost-maximizing sector, & for this reason, the procurement team is conscious of the minimizing of uses of paper.

Chapter-3

Segmentation of overall Procurement of AIH:

There are three segmentations of this procurement:

1. Disposable & Medical Consumables: This is part of procurement that covers the procurement of 450 to 600 items among the 1500 to 2000 items including medicines. In this procurement, all of the disposable & medical consumable items are covered: Disposable Gowns, Disposable Shoe Covers, Disposable Syringes, Diapers, etc. & also the Surgery items regularly required (150-200items), & the new items required by the concerned consultants (50-100 items per months). Coronary Stents or Heart Rings in different sizes are also included here. The different gels like ECG gels, EEG pasts, etc. are under disposable & medical consumable procurement.
2. General Procurement: This is the procurement of all non-medical, & non-consumable items like Liquid gas, Civil items, Electrical items, HVAC items, Information technology instruments, some lab items of Microbiology, Molecular Lab, Histopathology, Reagent items, chemicals, Kits, etc., Broiler items, Laundry items, etc. This is the procurement that covers all of the supportive instruments for a smooth hospital service, & some other instruments like Oxygen Gas for critical patients or the extra gas support needy patients.
3. Medicine Procurement: The most important part of procurement is directly related to the safety of life of patients. There are 500+ items of medicines by generic. We keep at least three items by brand medium to high quality & price against one product by generic. This is the most sensitive part of procurement where need to give importance to supply, & support smoothness.

Chapter-4

The types of procurement here in AIH:

In general, there are three types of procurement moods here.

- Credit Purchase: This is the procurement of the majority percent goods (more than 97% of overall procurement) with the terms & conditions negotiated credit period with the vendors like payment after 30-45 days of the supply of products, after-sales service, product delivery, product quality, & product return in any complaint of users. Here the comparatively lower price providing vendors with AIH's satisfactory quality is preferred.
- Spot Credit purchase: This is the type of procurement where the procurement team sources, & procures products from vendors or suppliers who are providing products at comparatively lower prices, but the procurement team isn't able to prepare,& approve comparative statements, or take approval single vendors price quotation for any logical issue like price change, brand change, etc.
- Spot Cash purchase: This is the minimum range of procurement where we buy very urgent local products like patient kit items, stationery items, etc. on cash payment. This type of procurement can be done for some critical vendors also with whom AIH has no previous business.

Besides these there are other types of procurement for some special items like several necessary IT items such as some IP, Anti-virus, etc. advance payment as per negotiated terms, conditions, & rates. Also, some installments of service for the several medical, & non-medical machinery for which we need to go to the critical vendors are paid in advance or a very short-term installment.

<u>Chapter-5</u>

<u>Procurement process of AIH:</u>

The overall procurement process of AIH is described below:

1. <u>Central Requisition</u>: This is the starting point of our procurement. Several inter-departmental requisitions come to the central store, & central store gives the central requisition to the procurement department. On the other hand, there are regular items for which the central store gives monthly or periodic requisitions. For the monthly central requisition the central store generally considers the previous three month's consumptions of the concerned items, & here are the inventory management technics of AIH supply chain management.
2. <u>Purchase Order Preparation, & Order Placement:</u> After a cross-check or reviewing of central requisitions procurement team searches for the sourcing of irregular items or new items because there is no supplier base for these items. After the sourcing process is completed by searching vendors, negotiating, and selecting payment terms from both sides the concerned person on the procurement team proceeds to prepare the order, buying goods in a short lead time. For the regular items, there is a supplier base, when the team reviews the requisition at that time the order preparation process starts. The purchase orders are prepared based on product quality, trade price, & dipo rate, product availabilities, lead time, after-sales service from suppliers, etc.
   After order preparation, the next issue is placing orders to the vendors in a friendly way for vendors.
3. <u>Goods Receiving Notes(GRN)</u>: These are the tasks of the warehouse or store department, though the procurement needs to be concerned about the items received by the store day by day, & here a deep collaboration has built up between the store,& procurement. The Procurement teams keep proper tracking of the receiving of the ordered items because if any items are missed by suppliers for any reason then the procurement team needs to re-order the goods or items to the alternative vendors in proper time to ensure a smooth supply of goods for effective patient service.
4. <u>Receiving GRN with needed documents:</u> After GRN completion & confirmation that all products are received as per bill or product challan the central store handovers all Bills and challans, with respective GRN to the Procurement department. After this,

the Procurement department keeps a systematic track of the received Bills, Product challan, & GRNs.

5. Bill preparation for the Finance Department: At the end of proper tracking the bills are ready for finalization for payment. Here from the back side, we attach the Approved Purchase Requisition, the Comparative statement/ Price quotation, this the Approved Purchase Order, Then Goods Receiving Note, Then Product challan, & Bills, Finally Payment Request Form. All are approved, & signed by the concerned responsible persons.
6. Bill Submission to Finance: Now the prepared bills are submitted to finance for payment to vendors on time, & also all bill issues are updated from time to time to the vendors for clarifications before or after payments.

Out of this process there is a fundamental deed in which the procurement team keeps the vendors up to date about their payment, & always solves any dispute raised after payment from the vendors like any VAT & Tax deduction issue, bills date & payment mismatch issue, etc., & we believe that this is a core issue for our vendor relationship management.

Chapter-6

Supplier Selection & Relationship Management

a) The supplier Selection Criteria of the Procurement team are:

There is a supplier base for the items generally required by the user departments with a minimum of three & maximum of 6-7 suppliers who supply the items, & based on the supplier base there has comparative statements, & price approval which are updated regularly based on the period. For these types of general items, we generally give priority the factors like desired quality, urgency of the items, & lead time, cost, and availability of required items in the market, etc. which means that the suppliers are selected based on the factors described above.

b) The Relationship Spectrum of AIH:

From the Supplier Relationship Management aspect, the Procurement team always follows the relationship approach which is a mostly discussed issue in modern Supply Chain Management, & as the relationships spectrum, we follow the Collaborative Relationship spectrum where our team as buyer and our suppliers work in a line for mutual benefits.

c) Supplier Development Tools:

1. Proactively working with Supplier Improvement strategies: Here we work proactively based on our quality specification of the desired goods or services. The procurement team collaborates with the direct concerns of users with suppliers to improve the quality of goods, & services.
2. Promoting Buyer, & Supplier Collaboration: From the very early stage of the Supply Chain this is proved that the supply chain can benefit from improved communication with suppliers. Our supplier collaboration takes place through proper or smooth on-time payment, Automated supplier scorecards, etc.
3. Addressing the most critical strategies: We focus on the most critical items regularly, & draw the attention of the suppliers based on the priorities. Through this, the suppliers supply the critical items on time. Through this, the procurement team collaborates with suppliers on the critical strategies where the procuring team thinks that the addressing will be beneficial for both of us.

4. Jointly working on supplier improvement initiatives: The procurement team works jointly with the concerned departments like Finance for smooth payment to the suppliers and user departments by providing specific, & clear products, & service specifications, etc. for spontaneous supplier relationship management.

d) Supplier Base Optimization: This is the supplier relationship management tool where we enable the purchasing team to procure from a smaller group of efficient, trusted, & also developed supply partners. Here we measure the efficiency of concerned suppliers by analyzing the regular supplier's supply performance, & trustworthiness about the supply whether in general, or complex situations like several unrest situations (Political, Environmental, etc.), besides these the developed suppliers by our initiatives are described above.

The benefits we have got by optimizing the supplier base are:

a) Control procurement cost: Where the large base of suppliers motivates more small orders, & a higher quantity of transactions, after optimizing the supplier base we get the benefit of a controlled procurement cost by giving large orders to a few suppliers in a secure volume, & get discounts, & other savings.
b) Get leverage from the selected & potential suppliers.
c) A highly collaborative relationship with a few, trusted suppliers, & also supply chain partners.
d) Waste reduction by the elimination of inefficient suppliers.

The core issue we take in our concern that maintaining the security of supplies by confirming that there are sufficient effective, efficient suppliers by whom all kinds of supply failures, supply shortage, & other supply risk at all.

Chapter-7

AIH Procurement & Relationship with Modern SCM:

A) Pricing & Revenue Optimization (PRO) :

- Market Segmentation: There is a segmented market of AIH healthcare providing sectors based on the classes, & abilities, & also the wish to pay of the patients who come to this hospital.
- Demand Forecasting: Predicting the market from the historical data of the company, market situation analysis, etc. Our Supply Chain & Procurement team predicts market, & demand from different price points.
- Price Optimizing: Determining which price adjusted with targeted quality needs to be offered to the concerned patient or customer to achieve the predetermined market share in the healthcare sector.
- Re-Calibrating Prices: The procurement team needs to monitor continually the effects of pricing or charge on various items, services, several medical tests, procedures, etc., & update market response prediction data, finally set the price dynamically to maintain optimal revenue by the collaboration with finance, & revenue department.

B) Strategic make / do or buy decisions:

- ➢ The Supply Chain Management team including procurement works collaboratively with the strategic team about the decisions that which product or service we need to make/ do instead of procuring. Here a periodical evaluation meeting takes place, & the decisions are taken with the analyzed data about cost, time, etc. As an example, this can be shown that in the middle of last 2023 the HVAC which means the Air-conditioning team had newly formed instead of the outsourced service by an external agency. This decision has minimized the procuring cost of HVAC service, & also improved the service quality from various aspects.

C) The procuring entities source the right products, at the right price (comparatively lower price), at the right time. Vendors have been selected from the vendor database. Here several factors keep their impact on this procurement, like user requirements (Because this is a service-related industry), & products or service quality, Urgency of required items (Because of a healthcare providing sector), & lead time, Inventory management target by management, national & international economic, political conditions, etc.

D) Our value-adding strategies that have flourished Supply Chain thinking:

1. Value Engineering: We practice this value engineering by analyzing regularly or periodically the value of our healthcare services from overall aspects like treatment, medication, consultancy, etc. at the designing, & developing stage, also involving the cross-functional teams like the Business Development team, & the Operation team work collaboratively with supply chain team for proper screening of the value from a broad aspect, & also to screen properly.
2. Lean or Agile SCM: Here basically we as a healthcare service industry follow the Leagile SCM process because we can't imply 100% lean (waste-free SCM) for the reason that we provide 100% urgent service where all suppliers can't provide each medical instrument instantly based on 24*7 hours, on the other hand, we never keep a bulk amount of inventories in our warehouse which makes waste or maximize inventory management cost by well-planned inventory management system like ABC analysis which is described in the next phase, & also there has the implemented target for inventory levels, & period (like inventory for 15 days). Besides these, there is an incentive for the achievement of targets.
3. Value-adding supplier network relationship: In this term, the supply chain team works collaboratively, constructively, & consistently to find out the ways of continuous improvement, and value-adding, for the mutual benefit of all parties about which we have described the broad aspect above.

E) The Value Stream Mapping of AIH supply chain: We try to imply Toyota's approach by a simple mapping of all key activities like the service generating processes, the SCM cycle time, the downtime of service, in-process inventory, movement of materials, & information flows, as:

1. The current condition of our process.
2. The desired or optimal condition of the process.

Chapter-8

SCM Monitoring Tools

Here we use or implement some distinct tools, & techniques

1. Pareto Principle in AIH procurement:

   Our procurement strategy adopts the Pareto Principle, recognizing that 80% of our outcomes stem from 20% of inputs. When placing monthly orders for products or medicines, we prioritize the essential 20% that contributes to 80% of our investment and service fulfillment. This approach enables us to identify and prioritize the critical items within our procurement spectrum, significantly impacting hospital operations across various facets, including cost and revenue.

2. ABC Analysis:

   In our procurement and supply chain framework, we implement the ABC Analysis methodology to classify items based on their significance

   Category A:

   a. Constitutes 20% of our overall products.
   b. Encompasses items with the highest annual consumption rates.
   c. Includes the most valuable commodities critical to our operations

   Category B:

   a. Comprises 30% of our product inventory.
   b. Consists of items with moderate annual consumption levels.
   c. Represents products of intermediate importance within our procurement spectrum.

   Category C like:

   a. Encompasses 50% of all goods.
   b. Includes items with the lowest consumption rates.
   c. Represents goods with minimal impact on revenue generation and operational efficiency.

Implementing these methodologies enables us to optimize our procurement efforts, focusing resources on items critical to our hospital's operational success while efficiently managing inventory across all categories.