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A Review of Procurement Practices of Regional Blood Centres for Complex Equipment and Consumables

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Abstract

Access to accurate, safe, and adequate diagnostics and dependable laboratory services is vital for diagnosis, surveillance, and ensuring a safe supply of blood. However, testing results are only of value to those making clinical conclusions if the test results reported are well-timed and correct. Selection and procurement of diagnostics and laboratory technologies are time and again challenging due to the extensive choice of products and suppliers in the global market. A study was commissioned to review the current procurement practices for complex equipment and consumables to enable Regional Blood Centres to weigh up the advantages and disadvantages of the 'purchase' and the 'lease' model and to make an informed decision between both models. The study is expected to provide practical guidance on negotiation strategies with vendors and describe the procedures that Health Departments must follow to lease equipment or procure consumables for purchased equipment. The study concluded that the rental model is already implemented successfully in all provinces at various blood banks and laboratories. Reagent rental and cost-per-test contracts with diagnostic manufacturers provide a viable solution to the challenges of high capital investments saving a huge amount of financial resources.

Keywords: Blood, Procurement, Equipment, Pakistan.

Introduction

Hospital medicine supplies and laboratory equipment significantly affect the quality of patient care, and they are responsible for a high proportion of healthcare expenses.[1] To meet priority healthcare needs and avoid wasting meager resources, health care officials must make informed choices about which medicines and equipment to buy. Healthcare procurement experts face challenges from both external and internal settings comprising political, legal, economic and business, and socio-cultural influences.[2]

Public procurements for healthcare are not an easy task. The government representatives need to be both capable and well-informed about needs, technical options, and market situations.[3] Public tenders must be set in a way that entices the most credible suppliers to come forward with their innovative products and deliver solutions to the health needs of tomorrow. This necessitates a strong inclination of the government to create a procurement mechanism and guarantee its sustainability by the commitment and adequate resource allocation. Throughout the world, blood transfusion services' goal is to deliver a life-saving service by guaranteeing an adequate and effective supply of blood and blood components. The blood centres require consumables for their operations.[5] These range from simple cleaning materials to packages of closed-system laboratory consumables available from only one vendor. The rising population in Pakistan demands judicious and prudent use of resources at hand which are becoming scarce day by day. The procurement legal framework plays an important role to safeguard transparency, accountability, and value for money.

Situation Analysis

The Government of Pakistan with technical and financial support from the Federal Republic of Germany has implemented the Safe Blood Project to reform the blood transfusion system along the lines of international models.[4] The reform objective 'to set up a Safe Blood Transfusion System within the provinces of Pakistan which enables safe blood transfusions' has been implemented in two consecutive phases, the first from 2010-16 and the second from 2017-21. Through this project, the German government financed the establishment of 25 Regional Blood Centres (RBCs) including the provision of equipment, purchase, and

installation of a Blood Bank Management Information System (BBMIS),[6] training for RBC personnel, and measures to attract voluntary blood donors.

The Regional Blood Centres require consumables for their operations. These range from simple cleaning materials to packages of closed-system laboratory consumables available from only one vendor. Earlier experience has shown that the Health Departments had difficulties in procuring laboratory consumables for equipment[7] because the costs were high and procurement from a single vendor was difficult. Anecdotal evidence from major blood banks in Pakistan shows that an alternative model to the purchase of equipment – equipment rental on a reagent basis – is increasingly used. This model appears to have economic advantages by saving huge investment costs.

Aims of Review

Hence, a study was commissioned to review the current procurement practices for complex equipment and consumables to enable Regional Blood Centres to weigh up the advantages and disadvantages of the "purchase" and the "lease" model and to make an informed decision between both models. The study is expected to provide practical guidance on negotiation strategies with vendors and describe the procedures that Health Departments must follow to lease equipment or procure consumables for purchased equipment.

Method of Review

This manuscript was based on a structured literature search using databases to see publications related to public procurement of equipment in the country. Besides, the study compromised of a review of Pakistan's Public Procurement Regulatory Authority (PPRA) ordinance, rules, and regulations. Further, a detailed analysis of the existing procurement procedures in the public healthcare settings including the reagent rental/lease procurement model was made. During the conduction of this study, field visits were made to Regional Blood Centres in Peshawar, Gilgit, Quetta, Turbat, Mirpur, and Muzaffarabad, all functioning in the public sector.

The Public Procurement Regulatory Authority Ordinance, Rules, and Regulations

The current procurement mechanism of Pakistan became operational in 2002 when the Government created a Public Procurement Regulatory Authority (PPRA)[8] at the federal level through a presidential ordinance. The ordinance was called the 'Public Procurement Regulatory Authority Ordinance, 2002 (XXII of 2002)'. The Ordinance anticipated the creation of an authority for regulating the procurement of goods, services, and works in the public sector including the healthcare service providers. The system was further strengthened by adding Public Procurement Rules 2004 and Public Procurement Regulations 2008. The PPRA Rules were later amended in 2006 through a Statutory Regulatory Ordinance (SRO) 65(I)/2006 of the Federal Government. These rules are applied to all procurements made by all procuring agencies of the Federal Government whether within or outside Pakistan.

Subsequently all provincial governments passed their respective PPRA Acts, i.e. Punjab Public Procurement Act, 2009; Sindh Public Procurement Act, 2009; Balochistan Public Procurement Regularity Authority Act, 2009; Khyber Pakhtunkhwa Regulatory Act 2012; Azad Jammu and Kashmir Public Procurement Regulatory Authority Act, 2017; The government Gilgit-Baltistan follows the PPRA Ordinance, 2002. All provincial procurements' legal framework is based on the 2002 template and advocates more or less the same principles.

Procurement Procedures in the Public Healthcare Settings

The existing procedures under the law require that the most appropriate method of procurement for a specific purpose is to be used. The higher the estimated value of a contract, the more rigorous and documented procurement methods are necessary.

1. For procurement with an estimated value of < 50,000 PKR, a simplified *petty purchase procedure* is followed.
2. For procurement of items costing 50,000 to 100,000 PKR, a *quotation-based procedure* is followed where a minimum of three quotations are requested, the price and contents are compared and the contract is awarded to the lowest bidder.
3. For procurements above 100,000 PKR, *competitive bidding procedures* are used either at the national or international level. The *national competitive bidding* (NCB) is usually for products that are from national

sources only. International *competitive bidding* (ICB), is on the other hand free bidding procedure comprising international sources. Bids are asked in an open invitation to vendors around the globe informing them about the prospect to compete for a contract. Bids are called internationally through the print media, PPRA website, and internationally recognized procurement advertising websites. It is mandatory for the public sector procuring agencies under Rule 12 of PPRA Rules 2004, to advertise their tender notices for procurements of goods, services, and works above 100,000 rupees on the PPRA website.

4. In case, the manufacturer for the product is limited to one only, then the *direct contracting procedure* is followed, e.g. consumables for equipment that are used in closed systems and are specific for the equipment item. However, this procedure requires pre-approval. It can also be applied in cases of emergency.

5. There is one more procedure called the *negotiated tendering procedure* which is allowed in special circumstances but not recommended as a routine (Rule 42(d) PPRA Procurement Code 2015; Rule 59(d) of Punjab PRA 2014). It can be applied in cases when equipment is needed for supporting a specific research project or an experiment, a study, or when goods are specifically manufactured for a defined purpose, for technical or artistic reasons, or for reasons connected with the protection of exclusive rights or intellectual property, and when the supplies are manufactured or delivered only by a particular supplier only. It is also applied in situations of extreme urgency brought about by events unforeseeable by the procuring agency, and the time limits for open and limited bidding methods cannot be met. In case, an institution plans to use this method for procurement it must document the reasons and justification for choosing it.

In case of costly and technically complex procurements, pre-qualification of bidders is done. Before the commencement of the procurement process, the potential vendors submit information for the consumer/buyer to assess their technical, financial, and performance history including their manufacturing capability. Bids are only solicited from the pre-qualified companies instead of open advertisement, but the remainder of the procurement process remains the same as for national or international competitive bidding. For routine equipment procurements, the most frequently used procedure is international competitive bidding. Once the equipment is purchased, then the direct contracting is followed for the consumables to be used on the equipment. This is because almost all the equipment in the clinical laboratories and blood banks are ‘closed systems’ and require the same brand of consumables.

Existing Reagent Rental/Lease Procurement Model in Blood Banks

The lease model of procurement, called reagent-rental procurement is now frequently used in clinical laboratories and in blood banks, especially for diagnostic/screening equipment. Reagent rental contracts are arrangements between diagnostics companies and clinical laboratories in which equipment will be placed in a laboratory on a ‘free of cost (FOC)’ basis in exchange for a guaranteed purchase of reagents over a period of time. As an alternative arrangement, an analyzer would be placed in the laboratory with the agreement that the laboratory would pay a specified amount per diagnostic test run based on the laboratory’s estimated test volume by type.

Planned preventive maintenance and up-gradation from the installed to a newer model is the sole responsibility of the vendor/supplier while the purchaser only has to ensure the purchase of an agreed number of consumables on yearly basis. Reagents are purchased at a set cost per test, which varies with the test volume.

The tender for the lease arrangement is published in the newspapers and on the PPRA website inviting bidders to ‘supply and install laboratory equipment on a reagent rental basis. The technical specifications and the quantity of consumables are included in the tender documents. The technical specifications, in this case, are vital to effective procurement as they offer potential vendors an accurate and complete representation of what is necessary. They specifically describe the features and performance prerequisites of the items to be procured but are impartial and unbiased and do not refer to any brand name identification. The evaluation is done under the umbrella of PPRA rules.

A successful bidder is expected to be an independent service provider liable and able to provide all the services

including transportation of the material to the site. User training and all other arrangements are also the responsibility of the bidder. All these details are included in the agreement with the bidder. A template of such a tender document is available and can be shared with the Programme Managers as and when required.

Advantages of Reagent Rental/Lease Procurement Model

The reagent lease model is an option definitely worth considering by blood bank and laboratory managers. This model provides extensive benefits for clinical laboratories trying to cut costs in the following ways:

- First, it allows laboratories to avoid the huge capital investment associated with the purchase of new equipment.
- For high-volume laboratories and those with more than one location, the capital expenditures (and the maintenance cost) can quickly become less.
- Training is the responsibility of the supplier.
- A reagent rental and/or cost-per-test arrangements contract with an average contract period of 3 to 5 years allows blood banks and laboratories to keep up with the latest developments in diagnostics machinery. When the contract has expired, blood banks and laboratories can simply replace older analyzers with new instruments that offer them the most wide-ranging, advanced test menus. In this way, blood banks and laboratories are able to update technology much more freely than by replacing equipment by purchasing a new one.
- The contract also includes service/maintenance expenses in the cost, providing additional savings for the laboratory.

Disadvantages of Reagent Rental/Lease Procurement Model

- A minimum number of tests has to be ensured when buying equipment on a lease basis. The higher the number of tests per year, the lower the cost of the consumables/test.
- The price of the consumables/test is slightly higher than when ordered for purchased equipment but since maintenance is free and no initial investment is required the overall cost/test is less than for purchased equipment.

Conclusion

Reagent rental and cost-per-test contracts with diagnostic manufacturers provide a viable solution to the challenges of high capital investments saving a huge amount of financial resources. Public money has to be utilized in a judicious way to obtain the best value for money. The rental model is already implemented successfully in all provinces at various blood banks and laboratories. Regional Blood Centres may initiate tendering such contracts and seek technical assistance from blood banks and laboratories experienced in the reagent rental/lease procurement model.

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