

Regulations on Purchasing Medical Equipment and Investing Technology and Equipment for Cancer Treatment at Bai Chay Hospital, Quang Ninh

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Abstract

Bai Chay Hospital has promoted the application of advanced medical techniques, developed infrastructure and information technology infrastructure in medical examination and treatment. Since then, many achievements have been made in people's health care, excellently completing the tasks of the sector, creating trust and satisfaction in the quality of medical services. By using mainly qualitative analysis and inductive, explanatory and synthesis method, Our study shows that Bai Chay Hospital has invested many modern medical equipment for their operation and cancer patient treatment. Therefore, when purchasing equipment, the price appraisal results of the state agencies competent to conduct asset price appraisal, the valuation enterprises for the types of assets, goods and services subject to price appraisal according to the provisions of the Law on price.

Keywords: Bai Chay Hospital, References and Regulations, Purchasing, Medical Equipment, Modern Scientific Technology, Smart Medical.

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INTRODUCTION

When prompted by the leaders of the Department of Health, they wanted to listen to the thoughts, feelings and emotions of medical staff in the procurement of medical supplies and equipment - a job that many medical staff consider to be "very sensitive" in the current period, like being opened up, doctors, pharmacists and engineers have boldly expressed their thoughts, especially difficulties and worries that need support., the guidance of the authorities, especially the need for a clearer legal corridor to protect health workers.

Through the listening and exchange sessions, the most common psychological state of the heads of medical equipment and supplies departments of hospitals today is easily recognized as anxiety, even confusion with the situation. assigned work. The medical staff in charge of supplying medical supplies, purchasing and maintaining medical equipment are standing between two legitimate but always opposing requirements: On the one hand, they must listen and respond to each other. meet the requirements of hospital specialists who always want the best medical supplies and equipment for diagnosis, treatment and patient care; On the other hand, must comply with the requirements

of the hospital's board of directors, especially to explain to state management agencies such as audit and inspection teams about the construction of estimated prices when bidding for procurement to ensure The purchase price must be the lowest price. (Source: medinet.gov.vn)

With a case study in Bai Chay hospital Quang Ninh province where management invest much on modern technology and equipment for cancer treatment, we research on this topic "**Regulations on Purchasing Medical Equipment and Investing Technology and Equipment For Cancer Treatment at Bai chay Hospital, Quang Ninh**".



Fig 1 - Bai Chay Hospital development

(Source: internet)

Research Questions

Question 1: Analyzing previous related studies?

Question 2: What are regulations used as reference in

purchasing medical equipment and situation of investing technology for cancer patients at Bai Chay hospital Quang Ninh?

Next we analyze related studies in below table:

Table 1- Summary of previous studies

Authors	Year	Content, results
DTN Huy	2015	Paid attention to risk management in such activities (TTB Hang et al, 2020; TTH Ha et al, 2019).
Diaconu et al	2017	Suboptimal device use is directly linked to incomplete costing and inadequate consideration of maintenance services and user training during procurement planning. Accurate estimation of life-cycle costing and careful consideration of device servicing are of crucial importance.
World Health Organization	2003	Low- and middle-income countries (LMICs) particularly lack the regulatory authorities, or biomedical engineering capacity, to advise on what MDEs are suitable for use in harsh deployment settings: i.e. facilities with high temperature, fluctuating electricity or no clean water supply. The problem is compounded by a mismatch in MDE supply: manufacturers are located and attuned to users in lucrative high-income markets Low- and middle-income countries (LMICs) particularly lack the regulatory authorities, or biomedical engineering capacity, to advise on what MDEs are suitable for use in harsh deployment settings: i.e. facilities with high temperature, fluctuating electricity or no clean water supply. The problem is compounded by a mismatch in MDE supply: manufacturers are located and attuned to users in lucrative high-income markets Low- and middle-income countries (LMICs) particularly lack the regulatory authorities, or biomedical engineering capacity, to advise on what MDEs are suitable for use in harsh deployment settings: i.e. facilities with high temperature, fluctuating electricity or no clean water supply. The problem is compounded by a mismatch in MDE supply: manufacturers are located and attuned to users in lucrative high-income markets Low and middle income countries lak the authorities or biomedical engineering capacity to advise on what MDES use in harsh deployment settings
Lari et al	2021	The most and the least effective aspects of medical equipment purchase management in the studied hospitals were found to be decision-making (path coefficient of 1.244) and organization respectively (path coefficient of 0. 845). Conclusion: It is crucial to take factors into consideration when using the facilities and capacities available in health and treatment centres. The proposed model can best guide buyer institutions to move towards efficient purchase mentioned in upstream policy documents
NTT Phuong, DTN Huy, PV Tuan	2020	banks should involve, this confirmed by (DTN Huy et al, 2021; Hac LD et al, 2021; DTN Huy & NT Hang, 2021).
PM Dat et al	2020	Risk management needed
Vu Thanh Binh et al	2021	We can offer patients with treatment solutions at home.

(Source: author synthesis)

SUBJECT AND METHODOLOGY

- Study Design: A cross-sectional descriptive study.
- Research subjects: Patients diagnosed with liver cancer are being treated at Cancer Center - Bai Chay Hospital - Quang Ninh province.
- Research period: from June 2019 to May 2020.

Data and method will be mainly qualitative analysis and inductive, explanatory and synthesis method used.

RESEARCH RESULTS

1. Regulations on purchasing medical equipment

Regarding the bid package price in the contractor selection plan, the official dispatch clearly states that the bid package price is correctly calculated, fully accounting for all costs to implement the bidding package, including contingency costs, fees, charges and taxes. When determining the bid package price in the contractor selection plan, it is necessary to base on at least one of the following documents:

Firstly, the price of goods to be purchased from at least 3 different goods suppliers in the area as a basis for determining the price of the bidding package; In case there are not enough 3 units in the area, you can refer to another area to ensure 3 quotes.

Second, the procurement estimate approved by the competent authority (including: Type of property, goods, services, quantity, unit price or the entire estimate arranged for the procurement of one type of asset goods and services during the year).

Thirdly, the price appraisal results of the state agencies competent to conduct asset price appraisal, the valuation enterprises for the types of assets, goods and services subject to price appraisal according to the provisions of the Law on price.

Fourth, the market price at the time of purchase is referenced from official information published by suppliers in accordance with Vietnamese law and exploited via the Internet.

Fifth, the price of the bidding package for procurement of similar goods in the nearest previous period, up to a maximum of 30 days.

2. Investing modern technology for Cancer patient treatment

In 2019, Bai Chay Hospital was invested with the most modern smart operating room in Quang Ninh province, including the most modern Navigation system in the country, mobile tomography (CT) scanners, infrared cameras, microsurgery glasses, anesthesia machines... of high quality, improving accuracy, safety, and increasing the success rate for complex neurosurgery, craniocerebral, and scoliosis. This system not only treats patients of Quang Ninh province but also people of some neighboring provinces.

These are new techniques that only a few central hospitals can perform such as Viet Duc Hospital, Ho Chi Minh City Orthopedic Hospital. There are a few localities at the provincial level, but the number of cases is quite small. The application of high technology in treatment brings great benefits to patients, minimizes unfortunate complications, and reduces costs for patients because they do not have to be transferred to central hospitals.

(Source: daidoanket.vn)

Pioneering in developing the field of cranial and spinal neurosurgery, Bai Chay Hospital was invested in a smart operating room system with an investment of VND 50 billion from the budget of the Smart Hospital Construction Project. Right after receiving and launching the leading modern smart operating room system in Quang Ninh province from 2018, Bai Chay Hospital has applied the smart operating room system combined with the current Navigation and CT navigation system. modern in cranial and spinal neurosurgery such as percutaneous screw surgery; spine surgery, disc removal and intervertebral bone grafting; brain tumor surgery...

(Source:benhvienbaichay.vn, access date 21/8/2022)



Fig 2 - Quang Ninh applied technology/IT for medical services (Source: internet)

CONCLUSION

Up to now, Bai Chay Hospital in Quang Ninh province has invested many modern medical equipment for their operation and cancer patient treatment.

Alri et al (2021) pointed that Medical equipment plays an effective and vital role in the diagnosis and treatment of diseases. Each society dedicates a plethora of health resources to these facilities. Since prioritizing and resource allocation are crucial in low-income countries with limited health resources, understanding and improving the purchase management of medical equipment in hospitals is a primary

key for preparing high-quality health services.

According to the initial investigation results, the People's Committee of Quang Ninh province approved the investment project to purchase equipment for the Obstetrics and Children's Hospital, with a total investment of 238,131 billion VND, invested by the Department of Health. The defendants from the Department of Health of Quang Ninh province mentioned above have colluded with the valuation consulting unit to issue the Certificate of Appraisal at a price higher than the market price, hooking up with the contractor and AIC Company., companies that have relations with AIC so that AIC and Mopha won all 6 bidding packages, worth 232 billion VND, causing damage to State property worth 73 billion VND. Last but not least, Krist et al (2016) pointed Increasing patients' engagement in their treatment can improve their experience and outcome. It can also yield valuable data for cancer research.

Hence, Bai Chay hospital and others need to follow regulations or references in purchasing medical equipment.

Also, government authorities and agencies need to issue suitable regulations and documents guiding on medical purchasing.



Fig 3 - Doctors at Quang Ninh hospital
(Source: internet)

RESEARCH LIMITATION

Authors can expand study for women cancer treatment solutions.

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CONFLICTS OF INTEREST

There is no conflict of interest.

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