

Research on the Impact of Drug Volume-based Procurement Policy on Hospital Cost Management: A Case Study of Aier Eye Hospital Group

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ABSTRACT

With the acceleration and expansion of the "volume-based procurement" policy, the prices of drugs and medical consumables in China have dropped significantly, effectively reducing the medical burden on patients. However, this policy has had a direct impact on the cost management of private hospitals, which are for-profit enterprises. As an important part of the medical service market, the cost management of private hospitals has undergone significant changes under the impact of the "volume-based procurement" policy. This article takes Aier Eye Hospital, a leading enterprise in the private medical service industry, as the case study object. Based on the economic consequences of the implementation of the "volume-based procurement" policy and the relevant theories of cost management, it deeply analyzes the transformation of Aier Eye Hospital's cost management model, existing challenges and coping strategies under the impact of the "volume-based procurement" policy.

KEYWORDS

Aier eye hospital group; "Volume-based procurement"; Cost management; Private hospital

1 Introduction

1.1 Research content

In recent years, the "Volume-based Procurement" policy, as a crucial measure in China's healthcare reform, has significantly reduced drug and medical consumable prices while alleviating patient burdens. However, it has also posed challenges to the profitability of private hospitals. As a vital force in the medical service market, private hospitals urgently need to transform their traditional profit models under policy impacts. This paper explores how the "Volume-based Procurement" policy affects private hospitals' profit models, analyzing changes in key elements including profit points, sources, targets, leverage mechanisms, and barriers before and after policy implementation. Using Aier Eye Hospital as a case study, this research delves into its profit model adjustments during policy shocks, revealing both opportunities and challenges. The findings indicate that while the policy drives private hospitals to expand business scopes, diversify profit sources, enhance leverage mechanisms, and strengthen barriers, it simultaneously brings risks such as goodwill impairment, declining profitability, and medical disputes. By examining the economic consequences of the policy from a private hospital perspective, this study fills a research gap in the field. Through case analysis, targeted optimization strategies for profit models are proposed, providing practical guidance for private hospitals to cope with policy impacts and enhance market competitiveness. The research not only enriches theoretical perspectives on profit models but also offers valuable references for sustainable development of private hospitals.

2 The text

2.1 Preface

2.1.1 Research background and significance

In December 2018, China launched the "4+7 City Drug Centralized Procurement Document", officially initiating pilot programs for centralized bulk drug procurement. By September 2023, the country had conducted eight batches of centralized bulk drug procurement and four batches of centralized bulk medical consumables procurement. The "bulk procurement" policy significantly reduced drug and medical consumable prices through volume-based price reductions, effectively alleviating patients' financial burdens. However, this policy has directly impacted the profitability of private hospitals. As for-profit institutions, private hospitals must proactively adapt to policy changes by optimizing their profit models to ensure sustainable development in the fiercely competitive market.

2.1.2 Research ideas and methods

This paper explores the evolution of profit models in private hospitals under China's volume-based procurement policy, analyzes existing risks and root causes in current business frameworks, and proposes optimization strategies.

Through literature analysis, we establish a research framework and conduct an in-depth case study of Aier Eye Hospital to examine its profit model transformation and corresponding improvement measures.

2.2 Theoretical basis

2.2.1 Conceptualization

Volume purchasing: refers to the integration of drug demand of medical institutions within an administrative region, and the negotiation with pharmaceutical enterprises through open bidding or negotiation, so as to achieve lower price and higher efficiency in drug procurement.

Private hospitals: refers to other hospitals other than public hospitals, including joint venture, joint stock cooperation, private, investment from Taiwan, Hong Kong and Macao and foreign investment.

Profit model: the way for an enterprise to obtain profit and realize value-added, which mainly includes five elements: profit point, profit source, profit object, profit lever and profit barrier.

2.2.2 Literature review

Current research primarily focuses on the impact of the "volume-based procurement" policy on pharmaceutical manufacturers, public hospitals, and patients, while studies on profit models for private hospitals remain relatively scarce. This paper systematically reviews relevant literature from perspectives including the definition, components, influencing factors, classifications, and optimization strategies of profit models, providing theoretical support for future research.

2.2.3 Theoretical basis

Ecological position theory: Enterprises adjust their ecological position according to the change of external competitive environment, so as to achieve differentiated competition.

Strategic map theory: Draw the causal relationship chart of enterprise strategy and guide the implementation of enterprise strategy by balancing the target relationship between the four levels (finance, customer, internal process, learning and growth) of the balanced scorecard.

2.3 Analysis of the impact of "quantitative procurement" on the profit model of private hospitals in China

2.3.1 Classification and operation status of Chinese hospitals

China's hospitals can be divided into public and private hospitals according to the type of registration. In recent years, the number of private hospitals has grown rapidly, but their service volume is still less than 20% of that of public hospitals. Most private hospitals are small in scale, and their total number of beds and utilization rate of hospital beds are far lower than that of public hospitals.

2.3.2 Comparative analysis of profit model elements of private hospitals in China before and after "quantitative procurement"

Profit point: Shift from relying mainly on sales of drugs and consumables to providing diversified medical services.

Profit source: from offline channels to online and offline combined service mode.

Target profit: From price-sensitive patients to a group of patients seeking high-quality medical services.

Profit leverage: from introducing external experts to promoting centralized procurement and digital construction of internal equipment, consumables and outsourcing.

Profit barrier: From relying on the price advantage of drugs and consumables to improving medical quality and medical experience.

2.4 Analysis of the impact of "volume purchasing" on the profit model of Aier Eye Hospital

2.4.1 Overview of Eye Hospital

Founded in 2003, Aier Eye Hospital is the world's largest ophthalmology medical group. As of June 2023, Aier Eye Hospital has 816 eye hospitals and centers. Through mergers and acquisitions and a tiered chain model, it has achieved rapid expansion and formed an ophthalmology hospital chain operation and management model adapted to China's national conditions.

2.4.2 Comparative analysis of profit model elements of Aier Eye Hospital before and after "quantitative procurement"

Profit points: The business scope of five major products including refractive, optometry services and cataract has been expanded, and cross-project specialist clinics have been added.

Profit source: The continuous increase of domestic and foreign medical outlets and the combination of online and offline services have enriched the profit source.

Profit target: The growth rate of outpatient diagnosis and treatment visits and the number of surgeries slowed down, but the coverage rate of patients in urban and rural counties increased significantly.

Profit leverage: Expand the distribution of medical services, improve the network of hierarchical diagnosis and treatment in the same city, promote digital construction, and improve service efficiency.

Profit barrier: Strengthen medical quality management, protect patient privacy and data security, standardize marketing and advertising activities, strengthen supply chain management, and consolidate the profit barrier.

2.4.3 Positive impact of profit model transformation under "volume purchasing" on Aier Eye Hospital

The proportion of medical materials cost decreased: by improving the centralized procurement system, the procurement cost was effectively reduced.

Market share expansion: Through acquisition and building digital service system, the market share has been improved.

Regulatory risk reduction: Compliance risks are reduced by standardizing marketing and advertising, strengthening privacy and data protection, etc.

2.5 Risks and reasons of the profit model of Aier Eye Hospital under "volume procurement"

2.5.1 Existing risks

The risk of goodwill impairment is prominent: large-scale mergers and acquisitions lead to the rapid growth of the initial amount of goodwill, accounting for a high proportion of total assets.

Profitability has a downward trend: return on equity and return on assets are at the lowest level in nearly eight years.

Medical disputes happen from time to time: medical disputes cause patients' trust crisis and affect the reputation of hospitals.

2.5.2 Risk cause analysis

Diminishing marginal benefits of mergers and acquisitions: the growth rate of operating income slows down, and the marginal benefits of mergers and acquisitions gradually disappear.

The centralized procurement of ophthalmic consumables is accelerated and expanded: the centralized procurement of high-value consumables such as artificial crystals and OK glasses has further compressed the profit margin.

Insufficient R&D investment: Sales expenses are much higher than R&D investment, which affects the improvement of medical technology and service quality.

2.6 Countermeasures for optimizing the profit model of private hospitals in China under "quantitative procurement"

2.6.1 General optimization strategies for profit model of private hospitals

Carry out volume purchasing led by the private sector: reduce procurement costs and enhance bargaining power by establishing GPO (drug purchasing organizations).

To the "technology and service to support medicine" model: improve the level of medical technology and medical service capacity, reduce the dependence on the sale of drugs and consumables.

Establish a multidisciplinary diagnosis and treatment mechanism: provide one-stop diagnosis and treatment services to improve the efficiency of diagnosis and treatment and patient satisfaction.

Develop the medical and nursing care integration model: cooperate with old-age care institutions to provide integrated medical and nursing services and expand the service scope.

2.6.2 Specific optimization strategies of profit model of private hospitals

Target low-end private hospitals

To the "technology and service to support medicine" model: by improving the quality of medical technology and

services, enhance patient trust and loyalty.

Expand non-basic medical services: Concentrate resources to expand value-added medical services to meet the diverse needs of patients.

Improve hospital rating: By improving hospital rating, enhance the brand influence and market competitiveness of hospitals.

Promote digital construction: use digital means to improve the fine management ability of hospitals and reduce operating costs.

For high-end private hospitals

Establish and improve the multidisciplinary diagnosis and treatment mechanism: provide one-stop, personalized diagnosis and treatment services to improve patients' medical experience.

Expand the integrated medical and nursing services: cooperate with high-end elderly care institutions to provide high-quality integrated medical and nursing services to meet the market demand of high-end customers.

Join the volume purchasing alliance or set up a GPO by yourself: reduce procurement costs and improve profit margins through collective bargaining.

Continue to promote digital construction: use big data, artificial intelligence and other technologies to improve hospital operation efficiency and patient satisfaction.

3 Research conclusions and suggestions

3.1 Research conclusions

The profit model of private hospitals has changed significantly before and after "volume procurement": profit point, profit source, profit object, profit lever and profit barrier have all changed significantly.

The transformation of the profit model of Aier Eye has brought positive effects: it has effectively reduced the proportion of medical material costs, expanded the market share and reduced compliance risks.

The risks and reasons of the profit model of Aier Eye Hospital are as follows: problems such as goodwill impairment, declining profitability and medical disputes are mainly caused by diminishing marginal benefits of mergers and acquisitions, centralized procurement of ophthalmic consumables and insufficient R&D investment.

3.2 Research Suggestions

Low-end private hospitals: They should shift to the mode of "supporting medical treatment with technology and service", expand non-basic medical services, improve hospital rating, join the volume purchasing alliance, and promote digital construction.

Mid-and high-end private hospitals: They should establish and improve multidisciplinary diagnosis and treatment mechanism, expand medical and nursing services, join the volume purchasing alliance or set up GPO by themselves, and continue to promote digital construction, so as to enhance market competitiveness and profitability.

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