REVOLUTIONIZING PATIENT ACCESS: DEVELOPMENT OF VALUE-BASED PRICING MODELS FOR BIOPHARMACEUTICALS IN EMERGING MARKETS

Dissertation Submitted to

The IIHMR University, Jaipur

for the partial fulfillment for the award of the degree of

Master of Business Administration (MBA)

in

Pharmaceutical Management

by

Anushree Rai

Under the Supervision and Guidance of

Dr. Ashok Peepliwal

2025

B – BLACK BELT BRAND BUILDERS

CERTIFICATE

This is to certify that ***Anushree Rai*** *in partial fulfillment of the requirements for the award of the degree of MBA (Pharmaceutical Management) from the IIHMR University, Jaipur has successfully completed her internship at B Black Belt Brand Builders during March 10 - May 31, 2025.*

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This is to certify that Anushree Rai in partial fulfillment of the requirements for the award of the degree of MBA Pharmaceutical Management from the IIHMR University, Jaipur under my guidance and supervision has completed her internship and his/her approach to the research study has been sincere, scientific, and analytical.

Dr. Ashok Kumar Peepliwal
IIHMR University, Jaipur
Date: 25th May 2025

Dr. Saurabh Kumar Banerjee
IIHMR University, Jaipur
Date: 25th May 2025

DECLARATION BY STUDENT

I hereby declare that this dissertation Revolutionizing Patient Access is the bonafide record of my original research work. I declare that it has not been submitted to any other university or institution for the award of any degree or diploma. Information derived from the published or unpublished work of others has been duly acknowledged in the text.

Anushree Rai

Date: 25th May 2025

ABSTRACT

Title:
Revolutionizing Patient Access: Development of Value-Based Pricing Models for Biopharmaceuticals in Emerging Markets

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Advisor Name: Mr. Vivek Hattangadi (Head Marketing)

Background:
The increasing expenditure of biopharmaceuticals has noticeably limited patient access to life-saving treatments in developing markets like India, where overhead healthcare expenditure dominates. Traditional pricing strategies often lack behind to showcase the real-world value of modern therapies, directing to one sided access and strict healthcare budgets. Value-Based Pricing (VBP) models offers a favorable substitute by ranging drug prices with patient results and health system savings. However, the execution of such models in India is limited due to regulatory vagueness, weak digital infrastructure, and insufficient result tracking systems. Understanding these barriers is important for designing productive, restricted VBP frameworks that can improve reach to innovative therapies

Objective:
Understand Barriers to Patients Access- Acknowledge and evaluate the economic regulatory, and market challenges that restrict patient access to innovative biopharmaceuticals.

Methodology:
This study used a cross-sectional survey, quantitative, approach using a structured questionnaire that was distributed online. Responses were collected from 129 stakeholders across pharma, healthcare, patient communities and policy in India. The survey captured affordability, barriers to VBP, digital readiness, outcome priorities and perceptions of drug pricing impact. Data were analyzed using descriptive statistics and visualizations to identify stakeholder insights and key trends applicable to VBP implementation.

Results/Findings:
The survey disclosed that many respondents (over 90%) believe drug pricing significantly influences patient reach to biopharmaceuticals in India. Affordability raises as a major concern, with most participants rating it as a serious or extremely serious issue. The great barriers to executing value-based pricing (VBP) identified were lack of outcome-based data, weak digital infrastructure, and regulatory uncertainty. Stakeholders ranked results such as good quality of life, reduction in hospital visits under VBP contracts and long-term cost-effectiveness. While 56% believed VBP could improve approach, most agreed that India's pharma industry and digital health systems are only partially arranged. Notably, over 70% of respondents said they would be more assured more medicine if its price was linked to actual treatment achievement, reflecting strong support for result-based pricing reforms

Conclusions:
The findings reveal firm backing for VBP as a tool to enhance access to high priced therapies,

with over 90% of respondents talking about the significant result of drug pricing on outreach. While there is broad confidence about VBP's potential, systemic barriers—such as regulatory uncertainty, limited digital health infrastructure, and lack of outcome data—should be viewed. The study concludes that India is at a crucial moment where coordinated improvement in health policy, stakeholder engagement, and data systems can enable successful adoption of VBP models, ultimately making innovative treatments more affordable and unbiased.

Keywords:
Revolutionizing, Patient Access, Value Based Pricing Models, Innovative, Biopharmaceuticals, Emerging Markets, Barriers, Market Challenges

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Thankyou
Sincerely,

Anushree Rai
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CHAPTER -1
INTRODUCTION

REVOLUTIONIZING PATIENT ACCESS: DEVELOPMENT OF VALUE-BASED PRICING MODELS FOR BIOPHARMACUETICAL IN EMERGING MARKETS.

Prepared for: SEF Leadership • **Prepared by:** Anushree Rai • **Date:** May 2025

1.1 Introduction

Many emerging countries struggle to get innovative biopharmaceuticals, largely because they cannot afford them, their healthcare is underdeveloped and their regulations are not unified (World Health Organization, 2021). Because non-communicable diseases (NCDs) are becoming more common due to the rise in population and cities, there is greater need for expensive biopharmaceuticals. This issue highlights problems in both the funding and delivery of healthcare.

Some believe Value-Based Pricing (VBP) offers a way to overcome these difficulties. VBP compares drug prices by their clinical impact, effect on the quality of life and how much they cost the system which helps balance new drug development with the stability of the health system (Towse et al., 2020). Although VBP is implemented in highly developed countries, it is only used in limited ways in low- and middle-income countries (LMICs) due to difficulty in HTA, lacking good health data and opposition from some stakeholders (Kaló et al., 2013).

This dissertation aims to discover the obstacles to using innovative biopharmaceuticals by patients in emerging economies, mainly looking at why more value-based practices are not implemented. As a result of these problems, people are facing budget constraints, poor process for purchasing needs, delays in accepting regulations and unclear disclosure of prices (OECD, 2018). Case studies of India, Brazil and South Africa were included, so the study now aims to deal with the unique contexts that must be followed to put VBP frameworks in practice in low-resource environments.

1.2 Problem Statement

Despite significant advancements in biopharmaceutical innovation, equitable patient access to these therapies remains a critical challenge in emerging markets. High treatment costs, fragmented healthcare infrastructure, and underdeveloped insurance mechanisms often result in limited availability and affordability of innovative drugs. Additionally, complex regulatory environments and inconsistent pricing and reimbursement frameworks further exacerbate disparities in access. These systemic barriers hinder the timely adoption of life-saving therapies, ultimately affecting health outcomes and widening the treatment gap. There is an urgent need to explore and implement value-based pricing models tailored to the unique economic, regulatory, and market conditions of emerging economies. **Understanding the multifaceted barriers to patient access** is essential to designing sustainable pricing strategies that ensure both innovation and inclusivity in healthcare delivery.

1.4 Objectives

1. **Understand Barriers to Patient Access** – Investigate the economic, regulatory, and market challenges that restrict patient access to innovative biopharmaceuticals.

2. **Evaluate Value-Based Pricing Approaches** – Explore global case studies and best practices in value-based pricing and their applicability in emerging markets.

CHAPTER - 2
LITERATURE REVIEW

2.1 Literature review-

The paper examined by "Unraveling elements of value-based pricing from a pharmaceutical industry's perspective" shows the methods used by pharmaceutical sector regarding value-based pricing (VBP). It is aware of the most important things that guide VBP strategies such as clinical effectiveness, affordability, patient outcomes, the market situation and regulations. The paper points out that healthcare prices should be in line with what the drugs offer to patients and healthcare systems.

Gonçalves discusses how the standard use of HTA to assess advanced therapy medicinal products (ATMPs) such as gene and cell therapies, is not always possible. Because ATMPs are costly and may take some time to work, they are limiting for a lot of patients. Value-based pricing (VBP) approaches discussed focus on values that influence society and consider how benefits will be felt for years to come. The approach recognizes the need for creative ways to finance these treatments such as using managed entry agreements and payment models based on results, to deal with risks and maintain access.

This article explores the way prices for biosimilars and originator biologics change in emerging markets. The study points out that biosimilars often only cost about 30% as much as their original biologics and there are some examples with discounts even greater than 60%. By using these strategies, hospitals in these places affect both market rivalry and how much healthcare patients have to pay.

The authors of the article "Implementation of Value-based Pricing for Medicines" (Claudio Jommi et al.) discuss adopting value-based pricing strategies in the pharmaceutical industry. It concentrates on how the usefulness and outcome of a drug should determine its cost. This paper points out that HTA and real-world studies are needed to back VBP approaches, so innovative treatments are affordable.

In the article, Patricia Danzon, Adrian Towse and Jorge Mestre-Ferrandiz describe the creation of value-based differential pricing (VBDP) for drugs considering the global market. It works to fix drug prices so they reflect the importance of the medication to each country, depending on its income and healthcare. They state VBDP could result in more affordable drugs reaching all nations, as well as encourage fair and efficient price setting around the world.

CHAPTER – 3
METHODOLOGY

3. Methodology

1.1 Research Design

This study used a **descriptive cross-sectional survey** design to know about public and stakeholder opinions about patient access barriers and the possibility for executing value-based pricing (VBP) in India.

1.2 Sampling and Data Collection

- **Population:** Researchers, pharma industry professionals, healthcare professionals, patients and public health officials.
- **Sample Size:** 129 respondents.
- **Sampling Technique:** Sampling was done through Google Forms.
- **Data Collection Period:** May 2025.
- **Instrument:** Structured questionnaire with 16 close-ended questions (Likert scale, multiple choice).

1.3 Data Analysis

Data were filtered and analysis was done using Microsoft Excel. Percentages, frequencies, and graphical visualizations (bar charts) were used to understand the data.

CHAPTER – 4
RESULTS & DISCUSSION

4. Results

This part of the research provides an in-depth view of the answers obtained from stakeholders in the Indian healthcare sector using the structured questionnaire. The purpose was to explore important barriers to patient access and explore if adopting Value-Based Pricing (VBP) models for biopharmaceuticals in India is possible.

4.1 Demographic Profile of Respondents

The study surveyed 129 participants, capturing diverse perspectives across age, gender, profession, and geography. A summary of the demographic composition is as follows:

- **Age Distribution:** The biggest group (around 40%) was in the 18–24 age range and the next biggest was people in the 25–34 group (30%). Such a young population might be made up of scholars, students and those just starting in their careers.
- **Gender:** There were more females than males and their share was 55% to males' 43%, while another 2% chose to identify in another way.
- **Education Level:** The sample is highly educated, as most participants (60%) hold a Master's degree and some even have a Doctorate/PhD (10%). This approach makes opinions within the field more in-depth.
- **Occupations:** Many of the participants worked in healthcare (doctors, nurses, pharmacists), the pharma industry, government and public health, private insurance sectors, academia and as patients. A large number of authors were from research and healthcare fields.
- **Geographic Spread:** The majority were found in urban areas (65%), followed by semi-urban towns (25%) and then rural areas (10%).
- **Annual Income:** Most of the respondents reported their annual income was ₹2.5–10 lakh.
- **Insurance Coverage** Of the people surveyed, about 60% had health insurance and the other 40% were not insured.

It includes opinions from a wide range of people involved in drug pricing matters.

4.2 Perceptions on Drug Pricing and Access

4.2.1 Impact of Drug Pricing on Patient Access

There was a clear view that the direct cost of drugs is one factor preventing patients from using new treatment options.

- **To a great extent** – 60 respondents (46.5%)
- **To some extent** – 58 respondents (45%)
- **Very little** – 6 respondents (4.6%)
- **Not at all** – 4 respondents (3.1%)
- **Not sure** – 1 respondent (0.8%)

Interpretation: About 92% think that pricing either significantly or slightly limits the ability of people to obtain treatment, suggesting a significant worry. Furthermore, not even 5% of respondents failed to acknowledge that pricing is significant, suggesting all stakeholders believed this. Many people supporting this viewpoint underline the immediate need to improve pricing.

4.2.2 Perceived Affordability Crisis

When asked about the severity of the affordability issue faced by patients seeking innovative therapies:

- **Serious** – 83 respondents (64.3%)
- **Extremely serious** – 31 respondents (24%)
- **Somewhat serious** – 10 respondents (7.8%)
- **Not serious** – 5 respondents (3.9%)

Interpretation: The survey data shows that more than 90% of people cited affordability as a big obstacle. This confirms the outcomes of many studies which find that the cost of out-of-pocket payments in India can be very high, particularly for patients suffering from chronic or extremely rare diseases treated with expensive biologics or gene therapies.

4.3 Key Barriers to Implementing Value-Based Pricing (VBP) in India

Perceived structural and operational bottlenecks must be understood when creating a VBP model:

Challenge	Responses	% Share
Lack of outcome-based data	38	29.5%
Regulatory uncertainty	29	22.5%
Weak digital infrastructure	27	21%
Low awareness among stakeholders	21	16.3%
Resistance from pharma companies	7	5.4%
Difficulty measuring treatment success	7	5.4%

Interpretation: It is common for researchers to point out that a lack of meaningful data from outcomes means there is a basic failure to obtain or share real-world evidence (RWE). Besides, tracking outcomes and enforcing deals with insurers is still difficult since digital infrastructure and regulations are weak. Because of these problems, it is obvious that updates are needed across the whole sector, including in laws and technology.

4.4 Preferred Outcomes in a VBP Framework

Respondents were asked to prioritize outcomes that should form the basis for pricing under VBP models:

Outcome Metric	Count	% Share
Improvement in quality of life	36	28.8%
Long-term cost-effectiveness	28	22.4%
Reduction in hospital visits/readmissions	26	20.8%
Patient-reported outcomes	12	9.6%
Speed of recovery	10	8%
Disease-specific clinical milestones	8	6.4%

Outcome Metric	Count	% Share
Real-world evidence from Indian patients	5	4%

Interpretation: It shows that people care about outcomes for their clinical health as well as for their health-related finances and easier daily living. People involved see that using cost-effective care that decreases hospital visits can lead to lasting savings which is closely related to VBP.

4.5 Stakeholder Beliefs on the Promise of VBP

When asked whether VBP can improve access:

- **Yes** – 72 respondents (55.8%)
- **Maybe** – 48 respondents (37.2%)
- **Not sure** – 9 respondents (7%)

Interpretation: 93% of respondents said they felt positive about what VBP can offer, although only 16% were fully confident. The fact that respondents express positivity means they are open to using innovative pricing as a solution.

4.6 Digital Infrastructure Assessment

Respondents were asked whether India has the digital tools required for VBP (e.g., electronic health records, outcome tracking):

- **Somewhat developed, needs improvement** – 75 (58.1%)
- **Inadequate** – 31 (24%)
- **Fully developed** – 15 (11.6%)
- **Not sure/No response** – 8 (6.3%)

Interpretation: 82% of people have expressed concerns about inadequate infrastructure, so improving it is key to VBP implementation. It supports federal plans for digital health, like NDHM and points out that there is still a lot to achieve.

4.7 Readiness of Indian Pharma Companies

On their preparedness for outcome-linked pricing:

- **Somewhat prepared** – 74 (57.3%)
- **Not prepared** – 33 (25.6%)
- **Very prepared** – 17 (13.2%)
- **Not sure** – 5 (3.9%)

Interpretation: While some hopeful attitudes are here, a majority of respondents say pharma companies are not fully ready or almost ready. Possible reasons might be not enough people trained in VBP, worries about changes in revenue and a low data culture.

4.8 Stakeholder Preferences and Behavioral Insights

Treatment Preferences Under VBP

- **Depends on disease** – 57 (44%)
- **Highly effective but high-cost** – 45 (34.9%)
- **Low-cost, moderately effective** – 17 (13.2%)
- **Not sure** – 6 (4.6%)

Trust in VBP-linked Medicine Pricing

- **Yes** – 101 respondents (78.3%)
- **Maybe** – 15 (11.6%)
- **No** – 13 (10.1%)

Interpretation: A considerable finding is that 78% of patients said they would trust medicines even more with performance-linked pricing. This points out that VBP serves more purposes than just economics, helping to improve patient trust which is needed in nations where good treatment and low prices conflict.

CHAPTER -6
CONCLUSION

Conclusion

5.1 Conclusion

The research points out that affordability is still a major problem for patients in emerging countries, so many of them cannot access these biopharmaceutical innovations. But applying value-based pricing may hold promise for India's market — if the approach matches the country's unique structures, digital sphere and rules. Key conclusions drawn from the data include:

- Higher prices for medicines often make it hard for people to get access to them. Nearly all of those involved agreed that the price of treatment has a big impact on its availability.
- Money is becoming a bigger problem for universities every day. A high number of customers (over 88%) found affordability to be very or extremely serious, confirming that current pricing is not sustainable.
- There are structural barriers that keep VBP from being functional. These three main problems — outcome data, digital infrastructure and regulation — are basic and necessary to address. As long as these issues persist, VBP will just remain a goal.
- Many people want to practice VBP. Almost every stakeholder was positive or cautiously hopeful about VBP, wanting to accept medicine prices based on how effective it is.
- Outcome priorities capture society's most important beliefs. Being able to stay healthy longer and afford care were key goals for respondents which matches the current global emphasis on health outcomes.
- There is not enough digital infrastructure or preparation in the pharma industry. India will need to make major changes and offer incentives for VBP to succeed here.
- Patient trust is based on fairness. VBP is seen by stakeholders as a model for ensuring fairness, because it connects efficacy to pricing and improves the openness processes.

5.2 Recommendations

India must handle various areas in order to turn theory into practice:

1. Digital Health Infrastructure

- Larger electronic health record (EHR) systems and outcome data repositories should be developed.
- Join data files across both government and private groups.
- Incentivize networks where government agencies and businesses can easily share data.

2. Regulatory Reforms

- Put into place guidelines for designing results-based contracts.
- Create rules for enforcing VBP under the NPPA/CDSCO.
- Let different policies and initiatives try outcome-linked methods of pricing.

3. Pharma Industry Engagement

- Create policies that give tax breaks to promote VBP programs.
- Interact with the private sector to trial partnerships in test projects.
- Have pharma companies assess how successful their products are following launch..

4. Awareness Campaigns

- Inform physicians, pharmacists and patients about how VBP works.
- Work with insurance firms to revise the way payments are made.

5. Equity and Rural Inclusion

- Guarantee all rural patients gain from VBP even when they have limited access to digital infrastructure.
- Try out VBP options in government health plans (for example, Ayushman Bharat).

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