



Editorial

Significant reduction in the cost of care for retinal diseases in India due to the approval of biosimilars: Lessons for health systems

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IMPACT OF BIOSIMILARS: COST OF CARE

The ophthalmic healthcare landscape in India has undergone a remarkable transformation over the past two decades, including advancements in biologic treatments for retinal diseases. Between the years 2006 and 2024, biosimilars, in particular, have contributed to a profound reduction in treatment costs. Analyzing these pricing trends offers insights into the potential implications of biosimilars for national health spending.

In 2006, the cost of Ranibizumab (Lucentis), a pivotal drug in the treatment of retinal diseases, was approximately INR 70,000/injection in India. When converted to USD, this was approximately \$1,750/injection, given the exchange rate of 1 USD=40 INR at the time. This was very similar to the price of Lucentis in the USA in 2006. The annual cost for a typical treatment course (excluding provider charges), consisting of six injections based on real-world evidence, stood at a staggering INR 420,000 (\$10,500) in India. This high cost imposed a significant burden on patients, making it a luxury that few could afford.

Fast forward to 2024, and the landscape has dramatically changed. The price of the innovator, Ranibizumab, in India has plummeted to approximately INR 20,000/injection, converting to about \$246.15 (2024 conversion rate of 1 USD = 81.25 INR). This price reduction is further complemented by the innovator drug manufacturer's introduction of a patient assistance program, which offers one free injection for each one purchased. Consequently, the annual cost of treatment, assuming an average of six injections, is now about INR 60,000 (\$731), down from INR 420,000, excluding provider charges. Remarkably, this represents an inflation-adjusted price reduction of about 94% from 2006 to 2024.

THE IMPACT OF BIOSIMILARS IN THE INDIAN MARKET

What contributed to this price reduction? The 2015 introduction of biosimilar Ranibizumab in India, which was the first in the world, was a game-changer. Since then, many other biosimilars have been approved in India. These biosimilars are available at approximately INR 6,000/injection (\$72), which is a mere fraction of the original innovator drug's price. Therefore, the annual biosimilar treatment cost is now INR 36,000, assuming an average of 6 injections/year, which represents a 97% price reduction from the 2006 innovator drug treatment cost. This significant decrease in treatment costs, which has been a boon for patients requiring such treatments, can be attributed to the competitive price pressure of biosimilars.

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COMPARING WITH THE US MARKET

The contrast with the United States is striking. In the US, the price of innovator Ranibizumab (Lucentis) for age-related macular degeneration has remained consistently high even today, at approximately \$2,000/injection. The biosimilar Byooviz, introduced in 2021, is priced at around \$1,100/injection, offering a 40% cost reduction. It received interchangeable status in 2023. However, this decrease pales in comparison to the dramatic price drops observed in the Indian market. The US market is known to have features that may more significantly limit price reductions compared to other countries, including monopolistic patent behavior that reduces competition and weaker government policies for drug price negotiation, especially by Medicare.

CONCLUSIONS AND IMPLICATIONS

The Indian healthcare system has demonstrated the significant impact that market competition and strategic

negotiations can have in reducing drug prices. The substantial price reduction of Ranibizumab and its biosimilar in India compared to the US highlights the effectiveness of India's healthcare policies and market dynamics.

Overall, the advent of biosimilars in India has not only made critical treatments more accessible but also more affordable, especially in a country where cost is a major barrier to healthcare. This case serves as a testament to the power of market forces and policy interventions in shaping healthcare outcomes, underscoring the potential of biosimilars as a solution to the global challenge of escalating healthcare costs.

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