

# Smart Spending in Health

Pharmaceutical Expenditure

## The Hidden Trade-offs of High-Cost Drugs

The case of Colombia

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New health technologies are emerging at an unprecedented pace. Some bring significant improvements in health to once untreatable conditions, while others offer modest clinical benefits. These innovations pressure health budgets everywhere and, though politically unpalatable, the fact is that no country, regardless of wealth, can fund all effective therapies for everyone.

**Choosing to finance some services necessarily means not financing others, and these choices have consequences in terms of population health.**

Technically, this is known as the *opportunity cost*: the benefit we could have received, but gave up, by taking another course of action (Giedion & Guzman, 2023). So, what is the opportunity cost of financing high cost drugs in low-and-middle-income countries? Should this opportunity cost be considered in decision making?

An IDB study by Gutierrez C., Palacio S., Giedion, U., and Ollendorf, D., (2023) estimated how much health is gained or forgone in Colombia by financing 10 high-cost drugs.

Colombian citizens have access to a wide range of health services through an explicit benefit package provided by the national health insurance system. They can also obtain treatments not included in the explicit benefits package through a special request made by the treating physician, or by a court order. A system called MIPRES keeps track of these purchases, the bulk of which are high-cost drugs.

Using MIPRES, the authors calculated the opportunity cost of 10 drugs selected among those with the highest cost per patient or/and the highest impact on the health budget. The selected drugs treat orphan diseases, autoimmune and degenerative disorders, cancers and diabetes, and annually, they benefit 23,261 patients, at a cost per person treated between USD 614 and USD 179 thousand.

To quantify the *opportunity cost* of these high-cost drugs the authors calculate the *Net Health Benefit (NHB)*. Broadly speaking the NHB is the additional health the high-cost drug offers compared to the alternative treatment, minus the health that can be achieved if the additional resources needed to finance the high-cost drug were used instead to improve opportunity and access through-out the health system. **The results show that:**

**The 10 high-cost drugs provide additional benefits ranging from 2 weeks to 1 year and 6 months of perfect health throughout the duration of the treatments, with a corresponding health system cost of USD 543.5 million for the care of the 23,216 patients.**

**If these resources were invested through-out the health system, the Colombian population could gain 88 thousand years of life in perfect health.**

Additional noteworthy findings surface. Contrary to expectation, drugs with the steepest prices don't always yield the greatest opportunity costs. Take aflibercept, addressing types of macular

degeneration, priced at USD \$2,100 annually per patient — third lowest among the 10 drugs. Due to its limited added benefit and the number of patients treated, it incurs the second-highest opportunity cost: 17 thousand years of life in perfect health (see Table 1). Therefore...

**...even drugs with moderate prices can have significant opportunity costs if their clinical benefits are limited and are prescribed to large number of patients.**

Decision making should encompass factors beyond efficiency —including equity and the prioritization of the worse-off. However, the results illustrate that decisions have costs in terms of lives and quality of life lost or gained, as such...

**...countries aiming to enhance population health should factor in opportunity cost when making decisions to align policies accordingly.**

→ **TABLE 1**

**Opportunity cost of drugs with low incremental benefits. The case of aflibercept.**

Health gained per person in weeks	2
Total number of persons treated	5,856
Total healthy life years gained	234
Total incremental cost (USD millions)	91.3
Health gains from investing the additional cost in the health system (years in perfect health)	17,240
Net Health Benefit (+)/Loss(-) in years lived in perfect health	-17,006

A second interesting result is that although higher prices are on average associated with larger health gains, the relationship is tenuous at best. For example, nusinersen for muscular spinal atrophy, and abatacept for rheumatoid arthritis, both provide the equivalent of 1.4 additional years in perfect health when compared to their alternative treatments, but while the first costs USD 1.5 million for the duration of the treatment, the later costs USD 24 thousand.

Finally, some of the high cost- drugs display significant variations in market prices which affect and can even make the high cost drug a better choice. Consider the example of lenalidomide for certain leukemia cases. Initially, average market prices were used for baseline estimates, comparing it with bortezomib. However, using the lowest reported prices for both drugs, lenalidomide becomes more effective and less expensive, leading to a net gain of 376 healthy years.

Economic evaluations can help inform choices by making the opportunity costs explicit. Countries can adopt a myriad of policies to minimize the opportunity cost of high-cost drugs.

**To cut opportunity costs countries can start by employing smart purchasing methods to secure lower prices for expensive drugs, aligned with their added benefits.**

Establishing precise guidelines for authorized medical specialists to prescribe these drugs and defining explicit protocols for initiating and discontinuing treatment can curb misuse and enhance clinical outcomes.

**Finally, low-and-middle-income should reconsider funding high-cost drugs with marginal benefits and substantial opportunity costs, especially if they struggle with essential health service coverage gaps that disproportionately affect vulnerable and marginalized populations.**

Gutiérrez C., Palacio S., Giedion, U., and Ollendorf, D. (2023). *¿Cuál es el costo de oportunidad de financiar medicamentos de alto costo? El caso de Colombia*. Washington D.C.: Banco Interamericano de Desarrollo. Forthcoming.

Giedion U., Guzmán, J., (2021). The Opportunity Cost Neglect in Healthcare: Bad Choices are not about Overspend but life Lost. Blog Post: Center for Global Development, December 13.

See the full study here

