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Comments

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PRICE OF PHARMACEUTICALS, VALUE, R&D, AND INTERGENERATIONAL EQUITY

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A few issues are more debated today than the price of pharmaceuticals. The debate is prompted by the lack of drug access for the world's population, the high expenditures of pharmaceutical companies in marketing and profits, and the need for research and development of new drugs.

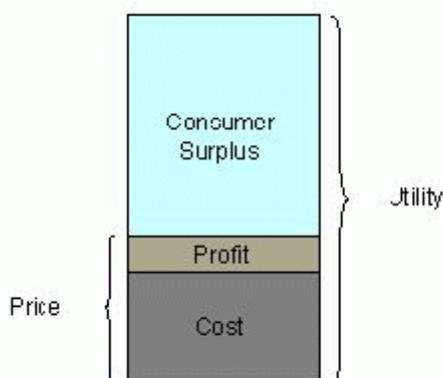


Figure 1: Competitive Market Drug Price

This discussion would be different if drugs were priced in a competitive market. In perfect competition -theoretical economic concept not found in reality-, the profit would equal zero and the price would reflect the cost. In practice, the price of a normal product is set as the

summa of the cost of research, development, production, distribution, and marketing of a product, plus the profit, or net income, needed to engage a company in a specific business (see Figure 1).

In a competitive market (see Figure 1), the price of a drug is lower than the utility or value for the patient, generating what we economists call "consumer surplus", that is the difference between the drug price and utility derived from the use of this drug. The combination of price and consumer surplus represents the consumer's utility, or the maximum price that the consumer would be willing to pay for a drug.

The problem with pharmaceutical prices is that there is not a competitive market for those drugs protected by patents or other type of market exclusion right (e.g. data exclusivity). In this situation, a pharmaceutical company can set the price at its highest possible level with the objective of maximizing company's profits.

Two basic arguments are brought by the pharmaceutical industry to justify the high price of pharmaceuticals: drug value and need for pharmaceutical R&D.

The first argument, pricing based on drug value, can be resumed in the sentence: "We need to look at the value of treatments - not just their short-term costs" [Kathy Bartlett, spokeswoman, Burroughs Wellcome (1)]. The value of the drug is the utility that the patient (and often other members of society) derives from its use. A pharmaceutical company, holding a patent, or other type of market exclusion right, that can exclude other competitor from market a drug, can set the price of the drug based on the value for the patient, not based on the real cost of the drug. In this case, the patient will be willing to pay for the high price because the inelasticity of the demand for drugs (the patient needs the drugs and a change in drug price does not affect the consumption), the financial support from health insurance available in most developed countries, and the high expectations that patients and health care professional have about drugs, derived in a large part from the effects of the pharmaceutical industry marketing.

The effects of pricing the drug close to, or sometimes over, its utility are the reduction of the consumer surplus and social welfare. At the same time, the company absorbs the overall value of the product surpassing the optimum level of profits. Additionally, the current pricing system allows pharmaceutical companies to appropriate the utility derived from the public research and development expenditures, which represents almost half of the overall research and development expenditures.

The second argument for high prices presented by the pharmaceutical industry is the need for drug research and development: "The price of our marketed products ... pays for current and future research and development." (2) Following this conception of drug pricing, payments include the cost of bringing drugs to the current patients and the cost of research and development of new drugs for future patients. These new drugs will increase utility for future patients and generations.

Nevertheless, when we ask patients to pay for research and development of new drugs we are asking to one of the lower income sectors of our society to pay, not just for their own care, but also for the care for future generations. This pricing system have negative effects for the patients because their utility dramatically diminish while they pay for increasing the utility of future generations of patients.

Financing research and development of drugs through patient's payments is unethical because they pay for the care of other members of society at the cost of their own utility. The system also threatens the intergenerational equity, because future generations will enjoy an increase in social welfare, at the cost of a reduction of the social welfare at the time when the patients pay for future innovation.

Another important consequence of patients paying for future innovation is that pharmaceutical companies are rewarded in the present for future innovation, instead of being rewarded in the future when the innovation is effective. Furthermore, the pharmaceutical companies are not accountable for the results of research and development, and the industry, and not our society, is deciding the amount of resources devoted to innovation and the cost of the innovation.

The problems generated by the current drug pricing system, reduction of social welfare and inequity when patients pay for future innovation must be addressed by the public sector. First, the public sector must guarantee, through a price control system, that the price of drugs does not absorb all the value or utility derived from its use. Second, society at large -including debt to be paid by future generations- and not individual patients must pay for future innovation that will increase future social welfare.

BIBLIOGRAPHY.

1. Holmer AF. President of PhRMA. Conference available on the Internet: <http://www.phrma.org/whoweare/presscorner/26.04.2002.402.cfm>. Accessed on November 16, 2002.
2. Los Angeles Times (LT) - Thursday August 31, 1989 Edition: Home Edition Page: 3 Pt. 1 Col. 2 Word Count: 779. <http://www.aegis.com/news/lt/1989/LT890813.html>. Accessed on November 16, 2002.

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It is certain that access to medicines by some of the world population leaves a lot to be desired. Pharmaceutical companies to a great extent are responsible for it and this is mainly due to the high price of medicines which are being put at our disposal as a consequence of

laboratory research. To do research turns out to be very expensive, but is it as expensive as pharmaceutical companies claim just to justify such exaggerated prices?

If we look at poor countries the situation is critical: poor countries which very often have to pay higher prices than in developed ones. And what is still worse for them: endemic illnesses (eg. malaria) are not interesting for the pharmaceutical laboratories to do research on them. Is there anybody who, nowadays might doubt that we would have very efficient medicines to treat malaria if this were endemic in western countries? But we also have to bear in mind that pharmaceutical laboratories are not ONG's but companies with shares and their shareholders want benefits.

The author understands that if the pharmaceutical market were more competitive prices of medicines would be lower. Nowadays every manufacturer works out the price in relation to research expenses (an average of 10-15 years takes to a laboratory to market a new molecule), development, production, distribution and even more the benefit that is added to the final price.

In a competitive market, the consumer should be the one who would fix the price that he or she would be prepared to pay for medicines.

The author thinks that it is difficult to lower prices because of the patents., but we must not forget that patents are also an incentive for the industrial research, without them industry wouldn't probably obtain the expected benefits and research wouldn't be "as encouraging".

Finally, the author thinks that it is necessary that public authorities control medicine prices; this seems to be a contradiction in the USA, the country of capitalism par excellence, then the same argument could be applied to any other product whose price would seem very high to us. However, in Europe, a long time since a great part of the countries don't allow full freedom to industry when fixing medicines prices as, in the end, it is the government which pay the bill, and we must not forget that in Europe the National Health Service is public but not in the USA.

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As it is well known, the totality of the pharmaceutical industry moves, every year, 400.000 million euros, more money than the Gross Inner Product of all and each one of the countries of the world, except the 20 greater ones¹. It means, probably, that the price of pharmaceutical products does not fit. These numbers are equivalent approximately to 80% of the GDP of Spain (that was of 523,646 million euros, in 1998²), similar to the GDP of Brazil or Holland, the double that the one of Switzerland, and four times more of the produced thing in Portugal.

This, surely, is more than to amortize the investment, and more than the cost of investigation and development of these medical drugs. As the author explains, the price also covers "the cost of investigation and development of new drugs for the future patients". And in addition there are more profit for the shareholders. All this provokes a series of reflections on its ethical aspects, that Seoane show in its valuable work.

REFERENCES

- 1.- Seoane E. Comunicación en el Curso de Economía de la Salud, de la universidad de Minnesota en Uninet. Programa de Dcotorado "Principios de Investigacion en Medicina y Cirugía". Available en <http://doctorado.uninet.edu/2002/ecosalud/> . Enero-Febrero de 2002
- 2.- Instituto de Esadística de la Comunidad de Madrid. Mayo de 2003. Disponible en <http://www8.madrid.org/iestadis/npib9598.htm>