

These high drug prices seem outrageous. Unfortunately, the price of Zolgensma is likely to stay high because it treats a disease that causes fewer than 500 deaths a year in the U.S. With so few customers, Novartis, the company that makes this drug, will have to continue charging high prices to recover its large research and development costs of producing this drug.

Despite seeing the \$2 million price tag for a drug, I remain hopeful that the prices of gene therapy drugs will decline eventually. In the short term, gene therapy drug prices will remain very high since these drugs are new and usually have absolutely no competition. However, as time passes, drug companies will develop competing drugs. The drug companies Novartis and Gilead both already have gene therapy drugs that treat leukemia. While both companies have patents on their drugs, the drugs are different even though they both treat the same disease. In order to make sales, these companies will lower their prices to avoid losing business to their rivals.

Another dynamic should also lead to lower prices for gene therapy drugs. The drug companies will probably find that they can increase their revenue by lowering their prices.

When reading an economics textbook, it is easy to have the impression that it is obvious to a company what price it should charge for its new drug. The book counsels the company to look for a point on the graph where two particular lines cross and read the price that should be charged off the demand curve directly above these intersecting curves. Of course, demand curves and the accompanying lines on the graph do not exist. In the real world, the firm will have to use trial and error to determine what price it should charge.

Luckily for consumers, even a drug company with a monopoly does not want to charge the highest possible price. For instance, suppose a drug company can charge \$1 million for a new treatment and sell its drug to ten people. The company will earn \$10 million in revenue. In contrast, the company may decide to sell the new drug for \$50,000 instead of \$1 million. At the lower price, more consumers will be able to afford the drug. Suppose 1,000 customers will buy the drug at \$50,000. At this lower price, the drug company will actually increase its revenue by lowering its price. Its new revenue will be \$50 million. Notice that the lower price allows the company to increase its revenue by \$40 million.

In short, there are two dynamics that should lead gene therapy prices to decline over time. First, drug companies will likely discover that they can earn much more revenue by lowering their prices to increase their sales. Second, competing gene therapies will be introduced over time, creating competition among drug companies, resulting in lower prices.

Joe McGarrity is a Professor of Economics at UCA. He can be reached at joem@uca.edu.