

## Symptom Management vs. Cures- Balancing Short-term Costs with Long-term Results

With new breakthroughs in technology, much of the conversation within the last few years in science has been about bridging the gap between treatments and cures. Gene therapy is one such option, with the FDA approving treatment for blood and bone marrow cancer in 2017.

Cures have the potential to save health care system money long term, but the cost to the system is more immediate. Most health insurance companies only forecast 18-24 months into the future to determine prices. Membership contracts are renewed on an annual basis and as a result companies cannot take these savings into consideration immediately. There is still hope that one time cures like gene therapy will help save money in the long run by being less expensive than their symptom management counterparts. In the mean-time prices for premiums would rise almost as soon as the treatment was released into the market. Health insurance companies are constantly monitoring the development of new drugs and treatments, and as a result they can react to them quickly by pricing premiums accordingly.

### Price Wars and Availability

Gene therapy has the potential to completely cure not only a number of rarer cases, but certain cancers as well. One factor that would greatly hinder this impact though would be cost. Treatment comes at a high price, “A gene therapy approved in Europe in 2012 costs close to \$1 million, and prices are expected to follow suit in the United States” (1). The competition for producing these treatments would be a huge determinant in price. If only one manufacturer is producing a drug class or disease category, they have a monopoly and would be able to set the price high, as opposed to the price war that would ensue if three or four companies were in the market, lowering prices for consumers.

### The More the Merrier- Let's Talk Premiums

When I talked to Mariyam Moonis, the Vice President of Business and Actuarial Analytics for Blue Cross Blue Shield Boston more about the implications of gene therapy, she stressed the fact that the purpose of insurance was to spread out risk among a pool of customers. Although the costs associated with gene therapy are high, companies would be able to ultimately manage this by increasing premiums for the people who are covered by private insurance. For those covered by Medicare or Medicaid, higher costs will need to be funded by the government and could result in increased taxation. However, Moonis suggests that overall health care costs will continue to increase until such time as favorable health outcomes emerge to offset them. For a single person, the cost of treatment using gene therapy is astronomically high, but the more people who are in the insurance pool, especially those that are healthy, the less the cost is going to be for everyone.

### What is Gene Therapy?

Gene therapy is an emerging field within genetic engineering that promises to bring about cures for conditions currently without treatment options. Advances in technology have allowed for clinical trials, with several options already available to the general public.

Unlike many other treatments currently on the market, gene therapy by nature is highly individualized. The process inserts a modified gene from the patient directly into the cells of a specific tissue through IV in order to “compensate for abnormal genes... [or] make a beneficial protein” (2). Individualization is what makes gene therapy more expensive upfront to produce than mass produced drugs. Patients of gene therapy incur a one-time cost though, as opposed to a pileup of expenses throughout the course of their lifetime.

This begs the question of looking “for systemic solutions to address overall cost for these treatments.” Insurance companies could take these long-term savings into account when setting prices for premiums if pharmaceutical manufacturers could guarantee outcomes or share in the risk of outcomes not being as favorable as expected. Change in public policy have the potential to mitigate costs. These are certainly problems worth considering in the future, but for now we can expect to see premiums rise as the popularity of gene therapy increases.

## Sources

- (1) [https://www.washingtonpost.com/business/economy/gene-therapies-offer-dramatic-promise-but-shocking-costs/2015/11/11/01f11cf0-824b-11e5-9afb-0c971f713d0c\\_story.html?utm\\_term=.03688134d8c5](https://www.washingtonpost.com/business/economy/gene-therapies-offer-dramatic-promise-but-shocking-costs/2015/11/11/01f11cf0-824b-11e5-9afb-0c971f713d0c_story.html?utm_term=.03688134d8c5)
- (2) <https://ghr.nlm.nih.gov/primer/therapy/procedures>