

## **Extended Half-Life Products Double Cost of Hemophilia Treatment, Prime Therapeutics Finds**

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The cost of hemophilia treatment doubled for patients who switched from standard half-life (SHL) to extended half-life (EHL) products, according to a recent study by Prime Therapeutics.

The findings of the study were presented at the Academy of Managed Care Pharmacy's (AMCP) Managed Care & Specialty Pharmacy 2018 Annual Meeting, which took place on April 23-26 in Boston.

Hemophilia is a bleeding disorder thought to affect 20,000 people in the U.S. The recommended treatment for patients with severe hemophilia is the replacement of the deficient clotting factor of that type of hemophilia.

About 80 percent of hemophilia patients have a deficiency of the clotting factor VIII – hemophilia A – and the other 20 percent a deficiency of the clotting factor XI – hemophilia B.

Intravenous infusions with a specific clotting factor revolutionized hemophilia treatment and dramatically improved the quality of life of these patients. However, clotting factors have a relatively short half-life – the time it takes for a person's clotting factor levels to drop to half – which can range from 8-12 hours for clotting factor VIII to 12-24 hours for clotting factor IX.

The short half-life of these products makes infusions up to three times a week necessary to maintain protective levels, which can have a negative impact on patient compliance.

The recent development of new factor products with extended half-life was able to stretch the time between infusions to once every week or two, with equal

effectiveness. EHL clotting factors have also been linked to increased treatment adherence and improved clinical outcomes.

Prime Therapeutics – a pharmacy benefit manager that helps patients get treatment and manage their costs – determined the difference in cost and amount of clotting factor units used for patients switching from SHL to EHL products.

Prime analyzed pharmacy and medical claims data from a population averaging 15 million commercially insured members per month from January 2013 to July 2017 to identify individuals with hemophilia A and B with claims for a clotting factor product.

The analysis identified 54 individuals (34 with hemophilia A and 20 with hemophilia B) who switched from SHL to EHL therapy and who met the study requirements for enrollment. The cost and amount of clotting factor units used over six months was calculated before and after the therapy switch.

Hemophilia A patients had a mean cost of \$127,168 for SHL products, compared with \$300,429 (2.36 times higher) for EHL therapy. To the researchers' surprise, switching to an EHL factor VIII product was associated with an increase (33 percent) in average number of units dispensed.

For individuals with hemophilia B, the mean cost for SHL therapy was \$116,909 compared with \$230,210 (1.97 times higher) for EHL products. The switch to EHL products showed a 14.9 percent reduction in the mean number of units used, which was consistent with less frequent infusions.

There was no indication of a bleeding event before or after the switch in these patients.

“This analysis of real-world claims data found that switching to EHL products often did not reduce the number of factor units members used,” Kevin Bowen, MD, and Prime’s principal health outcomes researcher, said in a press release.

“The frequent use of more factor units after the switch to an EHL product and much higher per unit cost of EHL products led to substantially higher costs for hemophilia treatment,” Bowen added.

The Prime researchers also noted that with four in five hemophilia A Prime members still using a SHL clotting factor product, the likelihood is high that many of them will

switch to an EHL therapy that would double costs to \$300,000 per year for each member.

If all hemophilia A Prime members currently using SHL products switched to EHL therapy, the costs for health plans and members could increase by more than \$130 million per year.

These findings support the need to closely assess the clinical benefits of EHL clotting factor products and their cost/effectiveness ratio, according to the researchers.