## *Assessing Potential Cost Savings in Utilization of Biosimilars vs the Originator Products*

**Background:**

Specialty drugs, also commonly referred to as biologics are a class of drugs produced from living systems such as microorganisms, plant and/ or animal cells. Biologic drugs play important role in treating variety of advance health-care conditions such as cancer, rheumatoid arthritis and psoriasis; and like all drugs, they are regulated and approved by the United States Food and Drug Administration (FDA). The cost of biologics is a factor that contributes to rising health-care plan cost, which is a big concern for most employers and consumers. The quest for finding newer solutions has led to the discovery of biosimilars. Conversely, Biosimilars are also FDA approved drugs that were developed to be highly similar to biologics, with no clinically significant difference between them and their reference biologic product. Hence, consumers can receive necessary treatment without compromising their health in the process at a lower cost to employers and insurance companies. Though biosimilars have been introduced in recent years, data on the true cost-benefit ratio of biosimilars to biologics is yet to be made concrete. Therefore, the purpose of this study is to determine the estimated cost savings on specialty drugs, with increased use of biosimilars over reference biologics based on current AWP market price and claims coverage.

**Method:**

This study evaluates potential cost savings if originator product is replaced with biosimilars. Data was retrieved from a database of de-identified claims data. This study analyses three originator drugs with their corresponding biosimilars: Remicade (infliximab), Avastin (bevacizumab) and Rituxan (rituximab). These three originator drugs each have three approved biosimilar which result to analyses of 12 products. Data provided includes medical claims, drug utilization and cost spending on originator product and biosimilars. This data was collected between August 2020 – July 2022, Healthcare Common Procedural Coding System (HCPCS) codes and National Drug Codes (NDC) of all drugs were used to identify medical claims in the data provided. Each originator product was compared to its equivalent biosimilar drug to evaluate for a true significant cost difference. Cost savings will be calculated by finding the difference between the amount of paid originator drug claims in comparison to its paid biosimilars claims using cost-benefit ratio analysis. This difference is then compared to market share price to evaluate potential savings for employers.

**Result:**

Potential cost saving to payors were estimated at an average of $680,000 (range: $360,000 - $1,000,000) for infliximab, $77,000 (range: $46,000 - $108,000) for bevacizumab and $145,000 (range: $86,000 - $204,000) for rituximab, if all the current originator product's utilization had been replaced by the biosimilar at 100% conversion. Overall 22% of all Infliximab claims are biosimilars, 49% of all Bevacizumab claims are biosimilar products and 48% of all Rituximab claims are biosimilar products.

**Conclusion:**

Overall, the amount of cost savings that could be realized through increased use of the biosimilars infliximab, bevacizumab and rituximab is significant. In total all five participating payors would have saved approximately $1,000,000 on the three studied drugs, if the biosimilars are used instead of the originator product at full biosimilar substitution. Given the relatively low utilization of biosimilars, important discussion need to be held with Payors to improve use of biosimilars because cost savings will become increasingly important as increasing amounts of biosimilars become approved for use.