

Medication Trend and Biosimilar Impact Analysis

**Applied Business Analytics
BAN5650**

**Prepared by:
JIGYANSHA DAHAL**





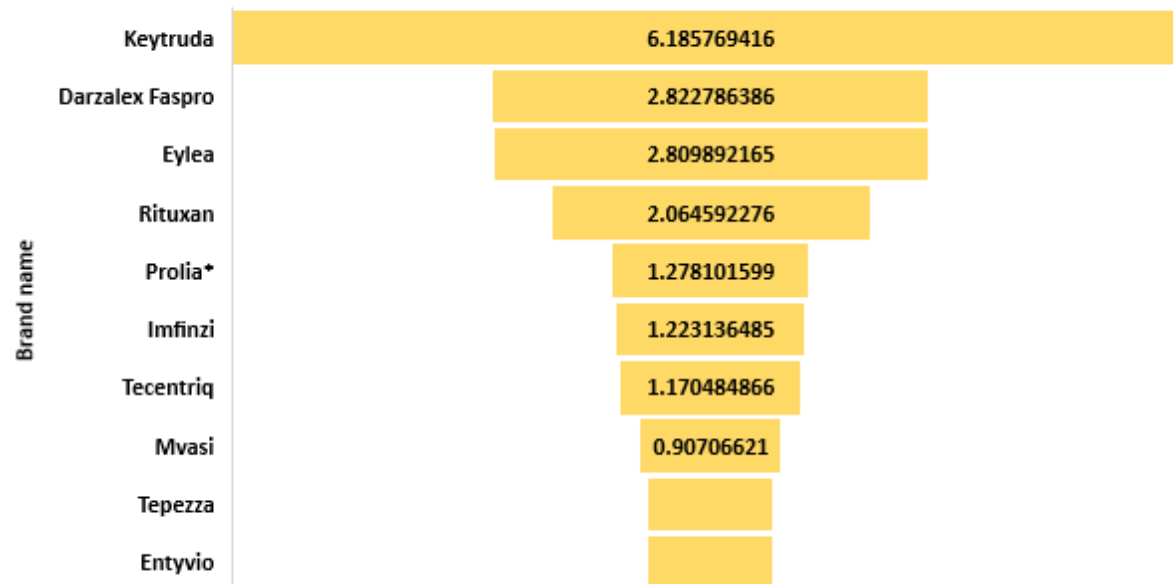
Trend drivers among medical benefit drugs

Total change in medication cost PMPM between 2018 and 2021

Year	BENES_FFS_CN T	Member_Months	Tot_Spndng	PMPM
2018	33503234	402038808	\$31,198,753,469.00	\$77.60
2021	30900379	370804548	\$40,140,960,792.00	\$108.25
Total change in medication cost PMPM between 2018 and 2021				\$ 30.65
Total percentage change in medication cost PMPM between 2018 and 2021				39.50%

- **39.50%** change in total medication cost PMPM between 2018 and 2021 which is approximately **\$30.65 PMPM** increment.

Top 10 medication with highest PMPM increase between 2018 and 2021



- **Keytruda** is the drug with highest PMPM increase of **\$6.18 PMPM** from 2018 to 2021.
- The drugs following Keytruda have a PMPM increase range between **\$0.8 PMPM to \$2.8 PMPM**



Entyvio payment increase change drivers

Entyvio payment increase impact drivers

Year	2018	2021
HCPCS_Cd	J3380	
HCPCS_Desc	Injection, vedolizumab	
Brnd_Name	Entyvio	
Gnrc_Name	Vedolizumab	
Tot_Spndng	243007130.9	526528196.5
Tot_Benes	8882	15742
Avg_Spndng_Per_Dsg_Unt_	17.21708333	18.96782155
Avg_Spndng_Per_Bene	27359.50585	33447.35081

Change driven by utilization

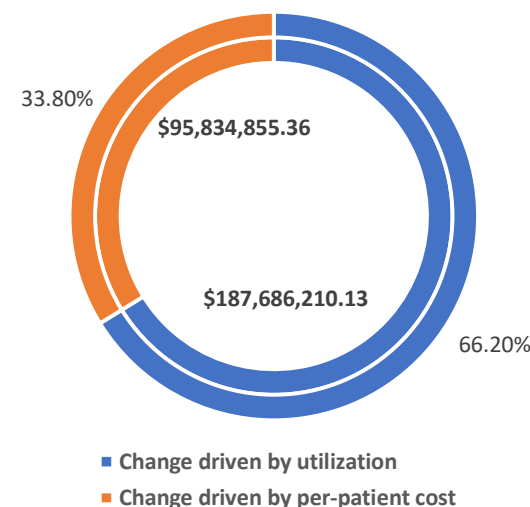
Impact on volume	6860
Avg_Spndng_Per_Bene 2018	\$27,359.51
Payment Increase	\$187,686,210.13
% of payment increase	66.20%

Change driven by per-patient cost

Impact on cost	\$6,087.84
Tot_Benes_count_2021	15742
Payment Increase	\$95,834,855.36
% of payment increase	33.80%

Total Payment Increase for Entyvio	\$283,521,065.49
---	-------------------------

Entyvio payment increase impact drivers



Out of the **\$283 million** payment increase for the medication “Entyvio”,

- **\$95 million** is driven by the **increase in per-patient cost** between 2018 and 2021.
- **\$187 million** is driven by the **utilization of Entyvio** (more patients are using the medication)



Gross impact of biosimilars In 2021

Gross impact of biosimilars In 2021

Biosimilar Reference Product Class	Actual cost in 2021	2021 cost if biosimilars are purchased at biologics cost	Cost savings from biosimilar medication pricing	Savings from biosimilar in percentage
HERCEPTIN	\$528,106,163.07	\$683,019,281.23	\$154,913,118.16	29.33%
NEULASTA	\$866,335,346.01	\$823,123,067.28	-\$43,212,278.73	-4.99%
NEUPOGEN	\$39,603,735.74	\$70,286,187.29	\$30,682,451.55	77.47%
PROCIT	\$146,847,355.29	\$152,776,705.37	\$5,929,350.08	4.04%
REMICADE	\$645,584,778.87	\$681,456,976.24	\$35,872,197.38	5.56%
RITUXAN	\$1,367,926,331.66	\$1,491,662,558.64	\$123,736,226.98	9.05%
Total	\$3,594,403,710.62	\$3,902,324,776.04	\$307,921,065.41	8.57%

- Overall, the use of biosimilars version of drugs saved the total cost by **\$307 million** in.
- Herceptin drug benefits the most from the use of biosimilar with a cost saving of \$154 million
- All the biosimilars have positive gross impacts excluding **Neulasta** with gross impact of **(\$43 million)**

The background image is a composite of medical and financial symbols. It features a silver stethoscope in the upper left, a brown glass pill bottle tipped over in the upper right with yellow and red capsules spilling out, and several red-and-white capsules scattered in the foreground. All these elements are overlaid on a background of US dollar bills, including a prominent \$100 bill. The entire image has a light, semi-transparent overlay.

Thank You!!!