Case study to explore patient-level impact of adoption of subsequent entry biologic anti-TNF medicines

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BACKGROUND

Canada has the second highest per capita biologic spending among OECD countries. Subsequent entry biologic (SEB) or biosimilar adoption remains low compared to other countries despite the Canadian biosimilar industry, Health Technology Assessment Agencies, and payers working to enhance biosimilar adoption. Anti-Tumour necrosis factor (TNF) medicines are a high cost burden for private payers and were an early class of biologics with available SEBs in Canada.

OBJECTIVE

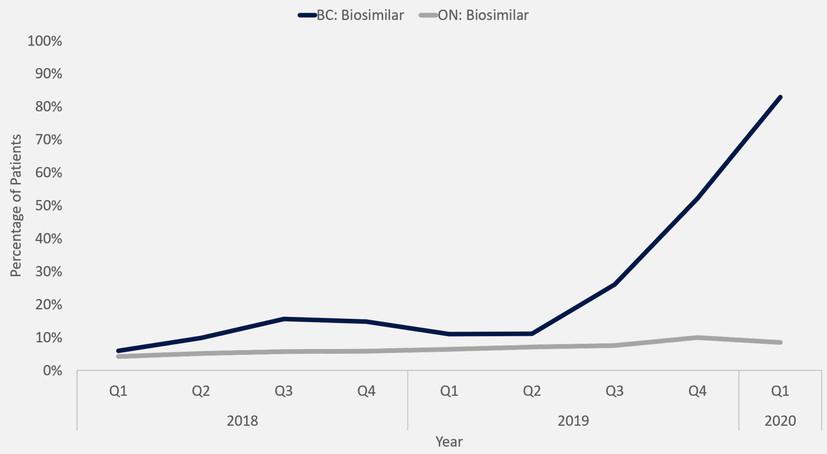
The objective of this analysis was to explore the patient-level impact of recent adoption efforts on SEB initiation of anti-TNF medicines in the Canadian Private market.

METHODS

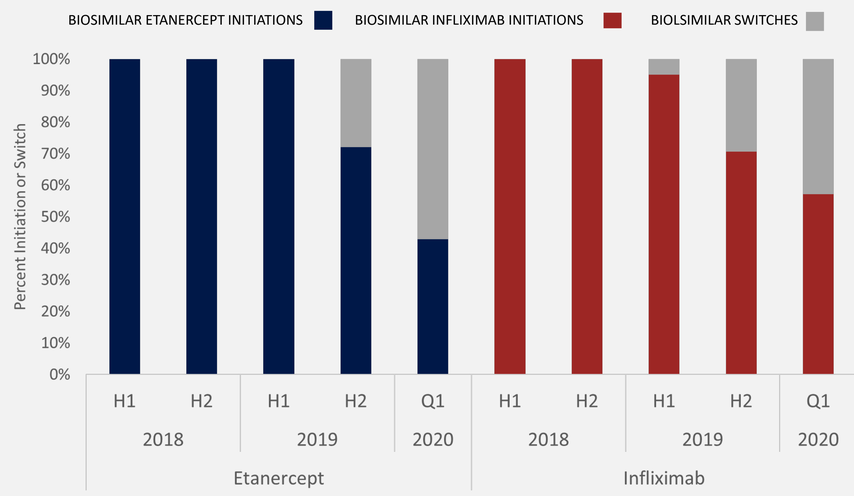
Overview: The population of interest was patients with at least one claim for etanercept or infliximab between January 2012 and March 31, 2020. Descriptive statistics (mean, standard-deviation [SD]) were used to describe trends in biologic and SEB initiation and switching. Subgroup analyses were conducted according to age, province, and gender. The analysis examined uptake of biosimilars (the proportion of patients receiving a biosimilar).

Data Source: This analysis was conducted using PDCI's Private Claims Database, representing an average annual sample of 1.6 million covered lives.

BRITISH COLUMBIA VERSUS ONTARIO BIOSIMILAR UPTAKE

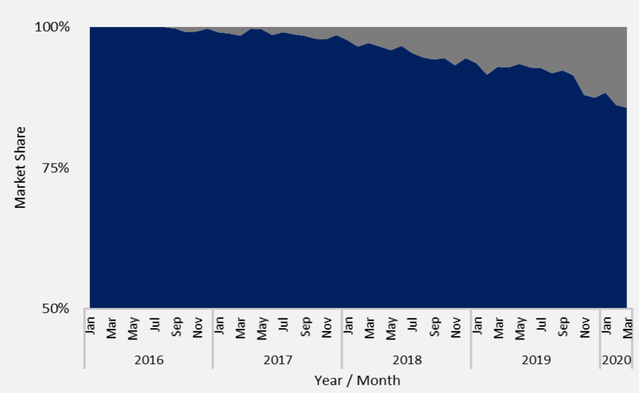


INITIATION *VERSUS* SWITCHING RATES FOR ETANERCEPT & INFLIXIMAB



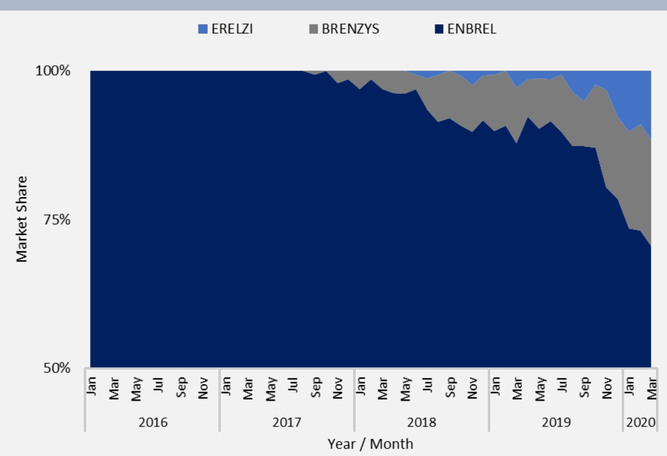
RESULTS

MARKET SHARE OF ETANERCEPT AND INFLIXMAB BIOSIMILARS IN CANADA AMONGST ANTI-TNFs

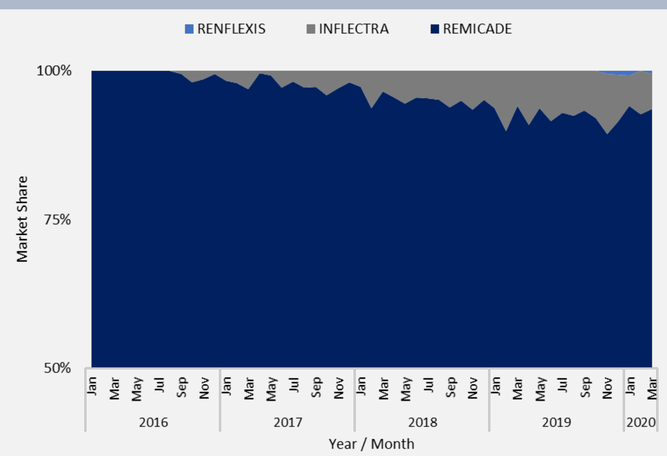


Of the 2,953 patients that were identified for this analysis. 164 received a biosimilar, 48% (n=79) of initiations were in the most recent 12-months (April 1, 2019 – March 31, 2020). 30 (18%) biosimilar recipients were switched from the innovator with 26 (87%) in the most recent six-months. The mean patient age when initiated with etanercept was 47.8 (SD=13.9) years; 44.7% were male. The mean patient age when initiated with infliximab was 38.5 (SD=14.3) years; 51.5% were male.

ERELZI & BRENZYS (*ETANERCEPT*) BIOSIMILAR UPTAKE IN CANADA



RENFLEXIS & INFLECTRA (*INFLIXIMAB*) BIOSIMILAR UPTAKE IN CANADA



DISCUSSION

- **Biosimilar uptake remains low** in the Canadian private market.
- Infliximab uptake remained low in 2019 and 2020; etanercept uptake increased from of 12% in 2019 to 28% in 2020
- Increasing biosimilar uptake is seen in the last 18 months and is driven by uptake in British Columbia (BC).
- Although early biosimilar uptake was limited to new patient starts, our analysis found recent increases in switching from innovator to biosimilars in the private market.
- Subsequent to public policy initiatives put in place in May 2019, BC private claims showed increased uptake of infliximab and etanercept biosimilars compared to other provinces[1]. The increase in uptake aligns with implementation of BC Pharmacare's Phase I and Phase II biosimilar programs.[2]
- BC's adoption of biosimilars outpaced other provinces including Ontario.
- A similar public initiative to enhance biosimilar adoption in Alberta was delayed due to pandemic considerations.[3] Similar initiatives were anticipated in Ontario but have not been announced.[4] Private market effects in these regions were not observed.
- Public reimbursement policy to switch patients from the originator to biosimilar infliximab may increase private switching.

CONCLUSION

While this analysis found recent increases in switching from the innovator to biosimilars in the private market, early uptake of biosimilars was limited to new patient starts. Further research is necessary to explore the impact of switching on patients in the Canadian private insured setting.

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