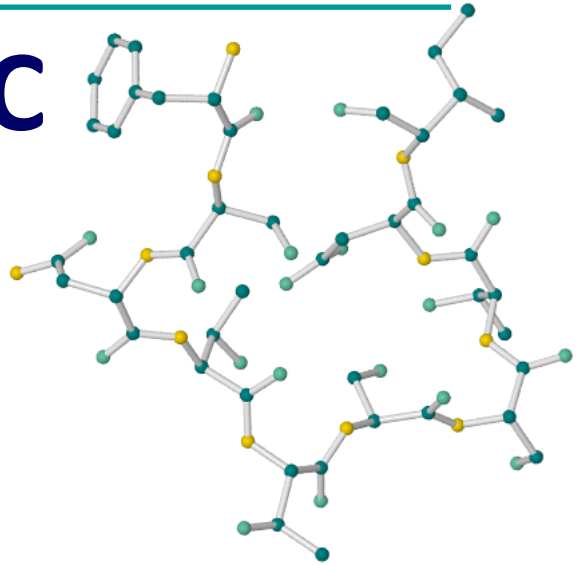
Biosimilars Initiative – BC Experience



May 10, 2023

ISPOR 2023

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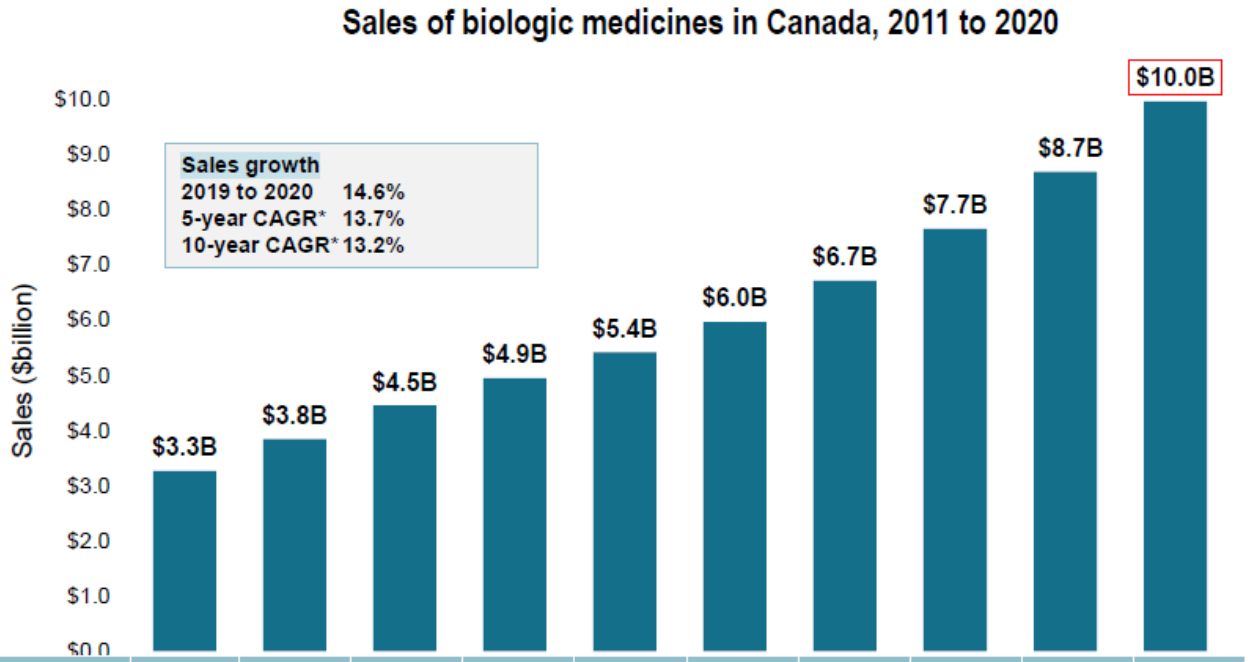
Pharmaceutical, Laboratory & Blood Services Division
BC Ministry of Health

BRITISH COLUMBIA

Outline

1. Biologics and Biosimilars
2. Biosimilar Policy
3. Policy Impact to Date
4. Summary

Biologics Sales in Canada

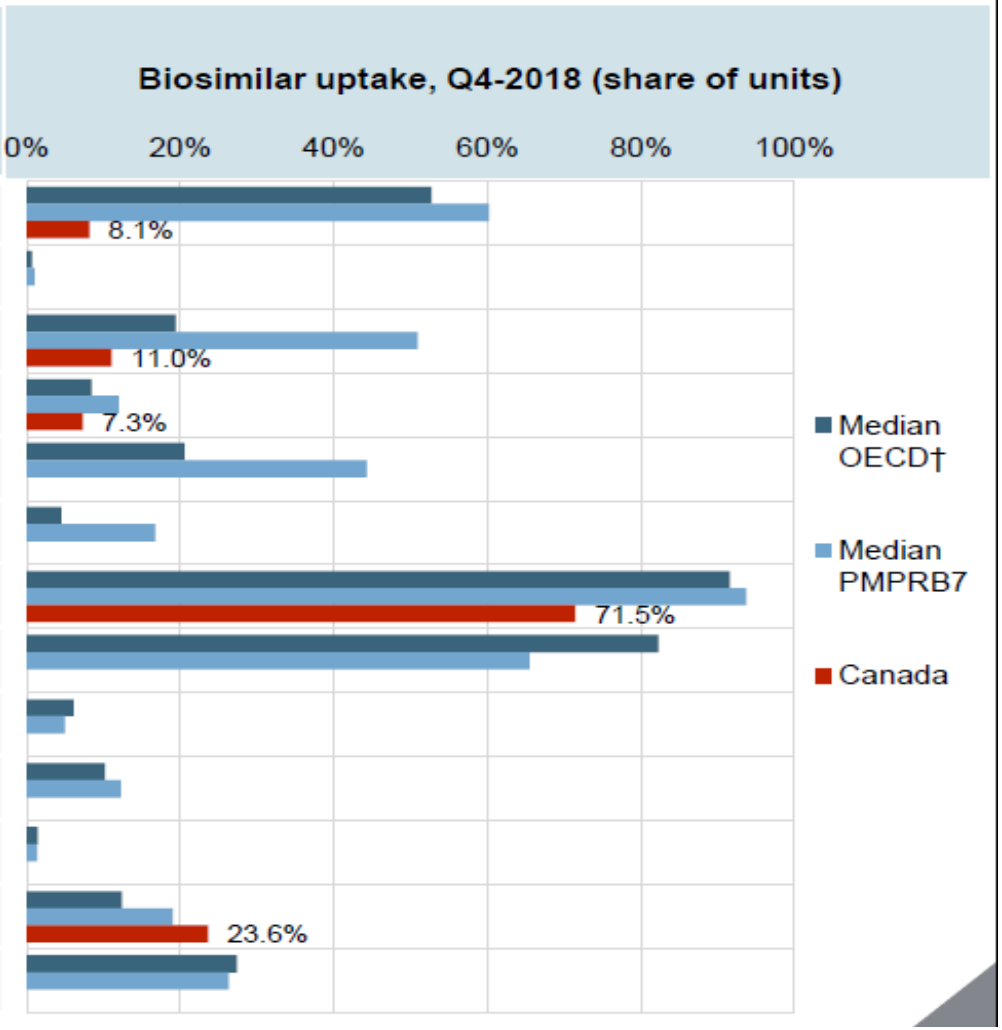


	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Biologic share of pharmaceutical sales	17.2%	19.9%	22.7%	24.1%	24.7%	25.9%	27.5%	30.1%	32.2%	33.9%
Biologic sales per capita	$96	$112	$129	$141	$153	$167	$185	$208	$233	$262

Source: PMPRB Presentation 2021 https://www.canada.ca/content/dam/pmprb-cepmb/documents/npduis/analytical-studies/slide-presentations/biosimilars-cadth/Biosimilars%20in%20Canada_CADTH%20Nov%202021.pdf

Biosimilars Uptake in Canada in 2018

Biologic medicine	Sales in Canada, 2018 ($million)
Infliximab	$1,123
Adalimumab	$800
Etanercept	$309
Insulin glargine	$285
Rituximab	$266
Trastuzumab	$186
Filgrastim*	$133
Epoetin alfa*	$103
Insulin lispro	$77
Enoxaparin sodium*	$58
Pegfilgrastim*	$47
Somatropin	$43
Follitropin alfa*	$18



Source: PMPRB https://www.canada.ca/content/dam/pmprb-cepmb/documents/reports-and-studies/chartbooks/biologics-part1-market-trends.pdf

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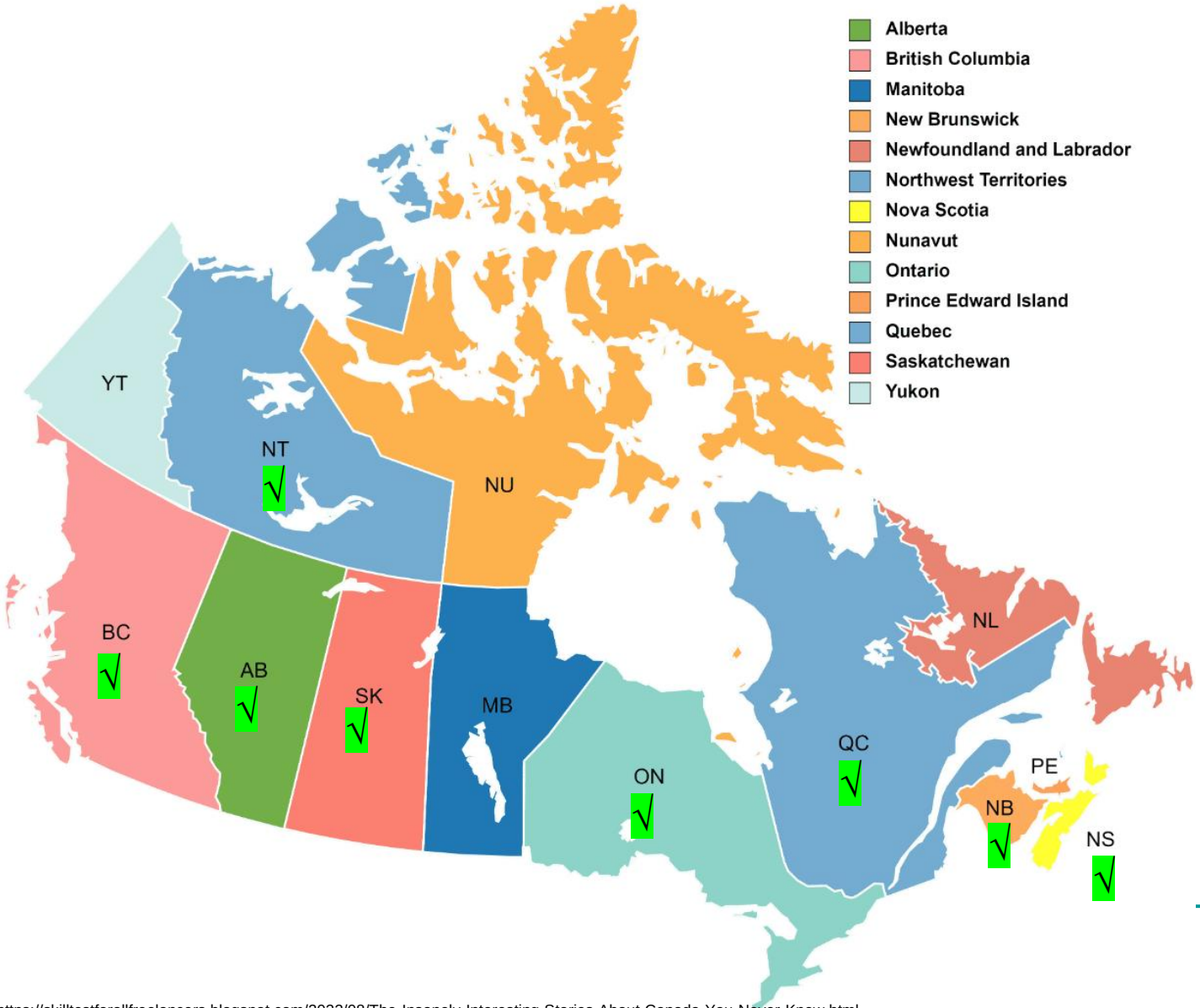
Biosimilar Initiatives in Canada



BC – 2019
AB – 2019
NB – 2021
QC – 2021
NT – 2021
NS – 2022
SK – 2022
ON – 2023

Image: https://skilltestforallfreelancers.blogspot.com/2022/08/The-Insanely-Interesting-Stories-About-Canada-You-Never-Knew.html

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Biosimilars Initiative in BC

- Key features of biosimilar coverage policy
  - 6-month transition period to switch from biologic to biosimilars to maintain PharmaCare coverage
  - New prescription from a prescriber required to transition patients
  - Prescriber and pharmacist fee to support patients in a transition journey
  - Monitoring
  - Exceptional coverage
  - Delisting of biologic after the transition period

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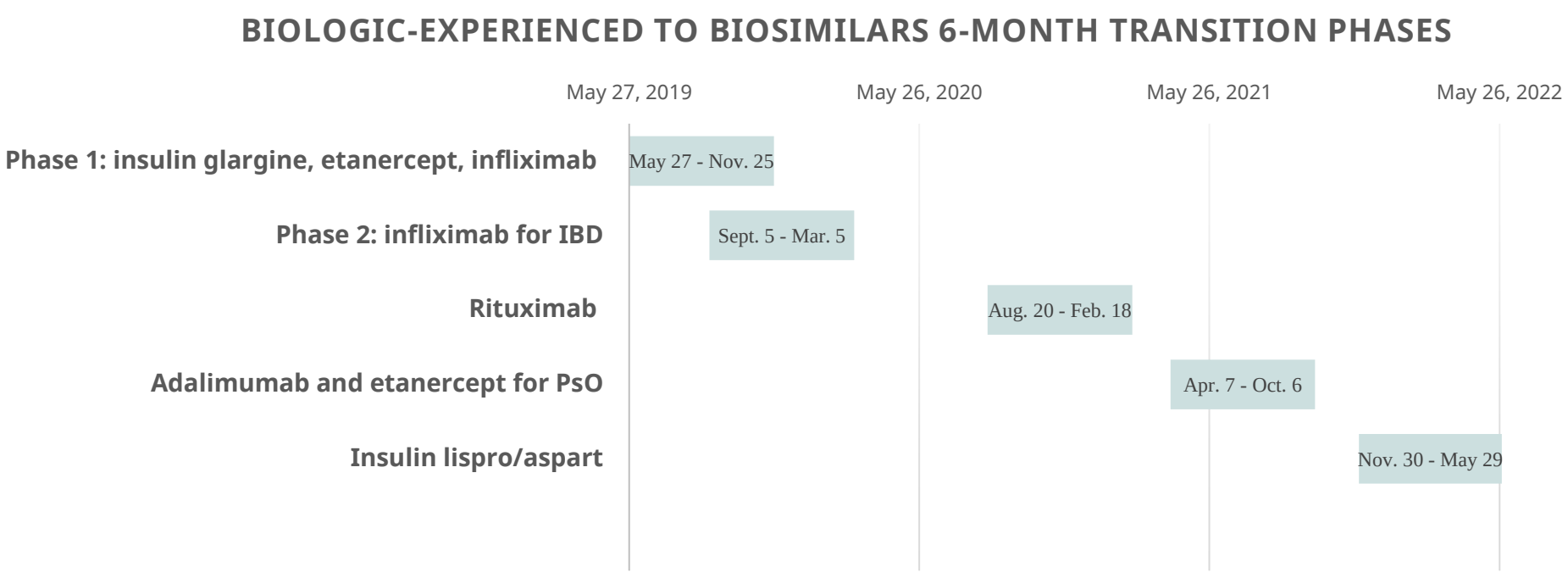
BC PharmaCare Biosimilar Coverage Policy



Uses: **Phase 1 - All indicated uses, except infliximab for IBD and etanercept for plaque psoriasis (PsO)**

Phase 2 - Infliximab for IBD

Rituximab – Granulomatosis with polyangiitis (GPA), microscopic polyangiitis (MPA), relapsing-remitting multiple sclerosis (RRMS), rheumatoid arthritis (RA)

Adalimumab – All indicated uses, except uveitis and Etanercept – For PsO

Insulin lispro/aspart – Type 1 diabetes, type 2 diabetes

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Monitoring of Biosimilar Policy

- Therapeutics Initiative (TI) provided monitoring of medication dispensation patterns and healthcare utilization
- Historical cohorts e.g., 2016, 2017, 2018, were constructed to serve as comparators for biosimilar (policy) cohorts
- Data sources: BC Ministry of Health (PharmaNet, client registry, and Medical Services Plan payment information) and the Canadian Institute for Health Information (National Ambulatory Care Reporting System and Discharge Abstract Database
- Outcomes investigated:
  - Adoption patterns
  - Refill patterns
  - Healthcare utilization: physician visits, ED visits, hospitalizations
  - Policy-specific outcomes, e.g. use of pulse steroids, NSAIDs, switch to other long-acting insulins
  - Disposition of non-switchers

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Assessment of Biosimilar Policy

Biosimilar switching/new starts amongst PharmaCare patients

After 24 months:

- **Phase 1** Etanercept: 2863/3049 (94%)
  Infliximab: 714/777 (92%)
  Insulin glargine: 26,738/29,385 (91%)
- **Phase 2** Infliximab for IBD: 3205/3325 (96%)

After 18 months:

- **Rituximab** GPA/MPA/RRMS/RA: 1544/1632 (95%)

After 18 months:

- **Adalimumab** : All indications, except uveitis: 6817/7405 (92%)

- **Total: ~41,881 PharmaCare patients switched to or started on a biosimilar**

(based on claims data May 27/19- May 25/21 for phase 1 and Sep 5/19 – Sep 3/21 for phase 2, Aug 20/20 – Feb 19/22 for rituximab, Apr 7 – Oct 6/22 for adalimumab)

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Assessment of Biosimilar Policy

Biosimilar switching/new starts amongst BC patients

After 24 months:

- **Phase 1** Etanercept: 2918/3174 (92%)
  Infliximab: 787/976 (81%)
  Insulin glargine: 35,761/44,136 (81%)
- **Phase 2** Infliximab for IBD: 3621/4354 (83%)

After 18 months:

- **Rituximab** GPA/MPA/RRMS/RA: 1860/2143 (87%)

After 18 months:

- **Adalimumab** : All indications, except uveitis: 7212/8015 (90%)

- **Total: ~52,159 BC patients switched to or started on a biosimilar**

(based on claims data May 27/19- May 25/21 for phase 1 and Sep 5/19 – Sep 3/21 for phase 2, Aug 20/20 – Feb 19/22 for rituximab, Apr 7 – Oct 6/22 for adalimumab)

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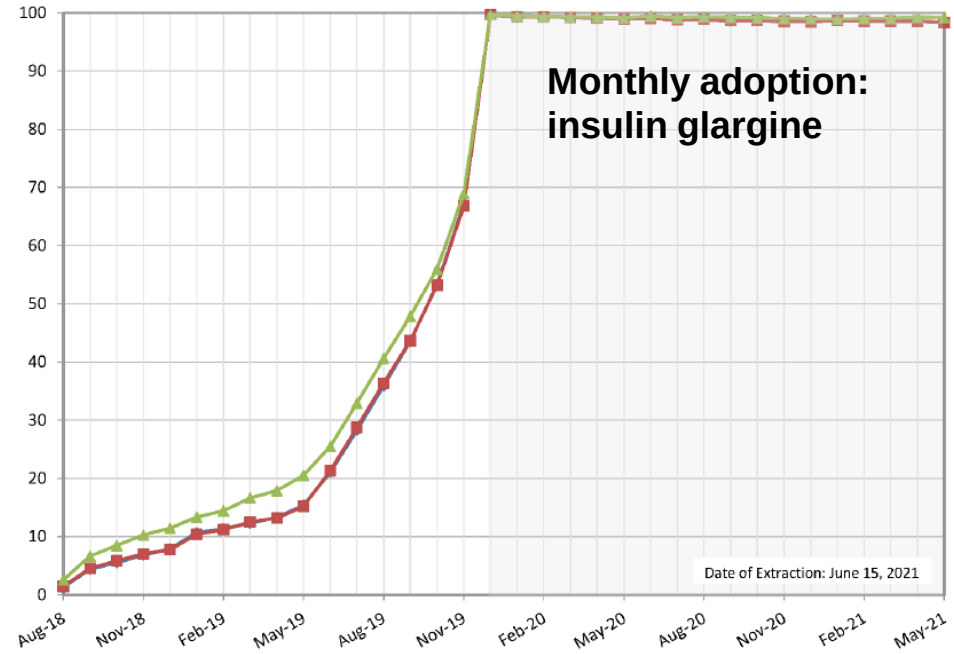
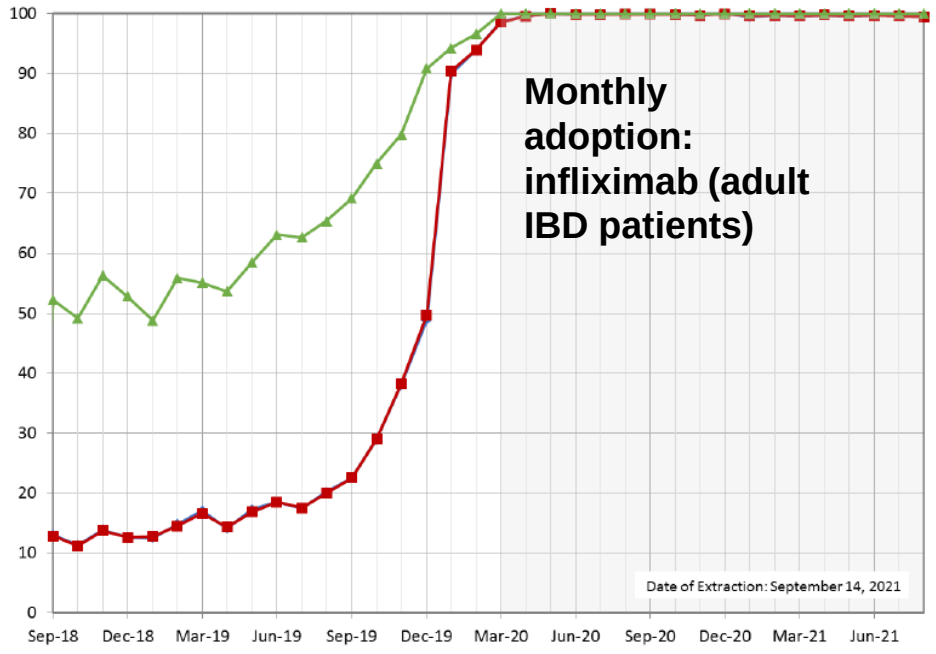
Adoption Patterns

- Large and rapid adoption of biosimilars by PharmaCare patients and prescribers
  - > 98% of PharmaCare patients adopted biosimilars after 6-month transition period for both phase 1 and 2





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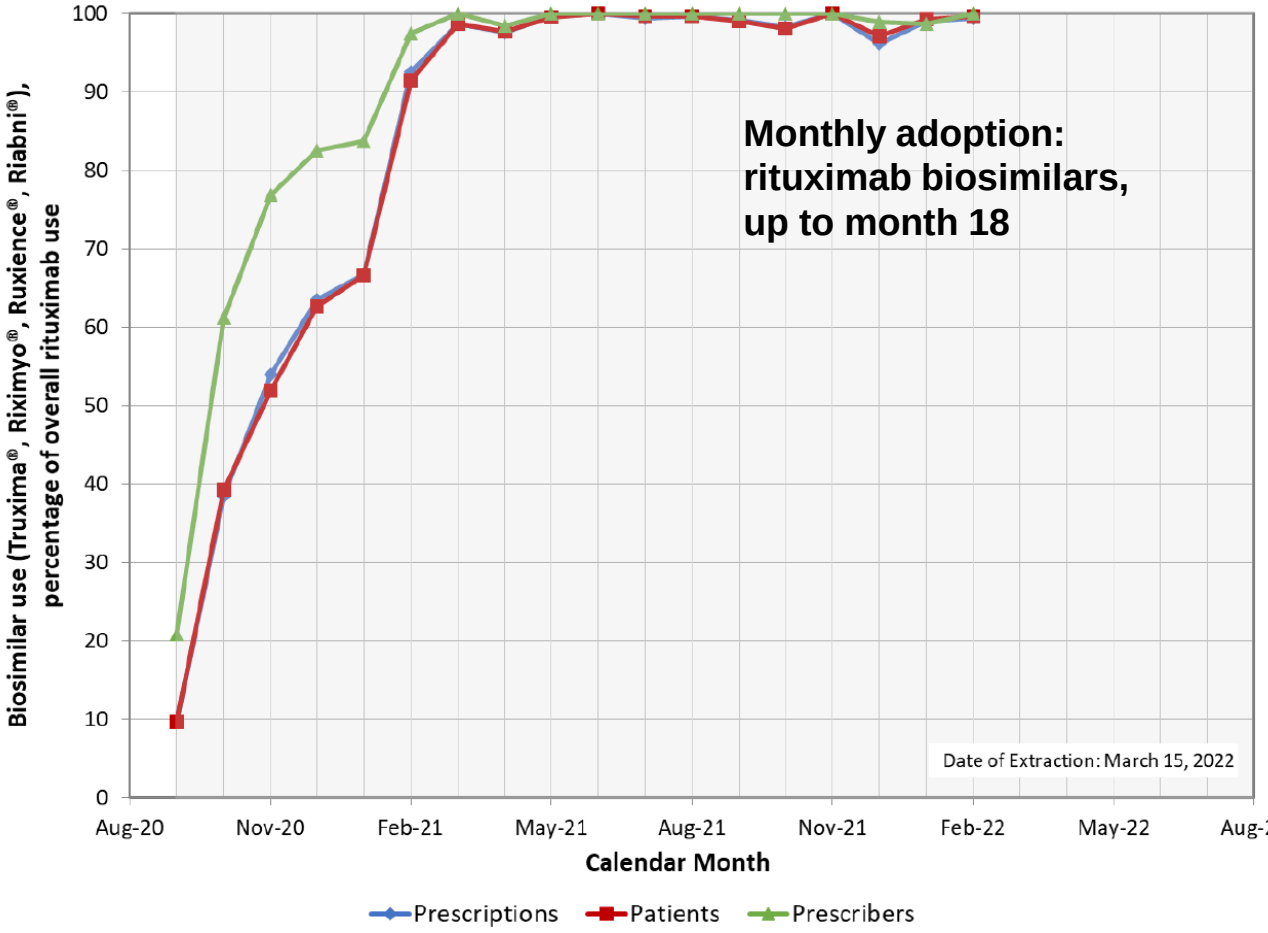
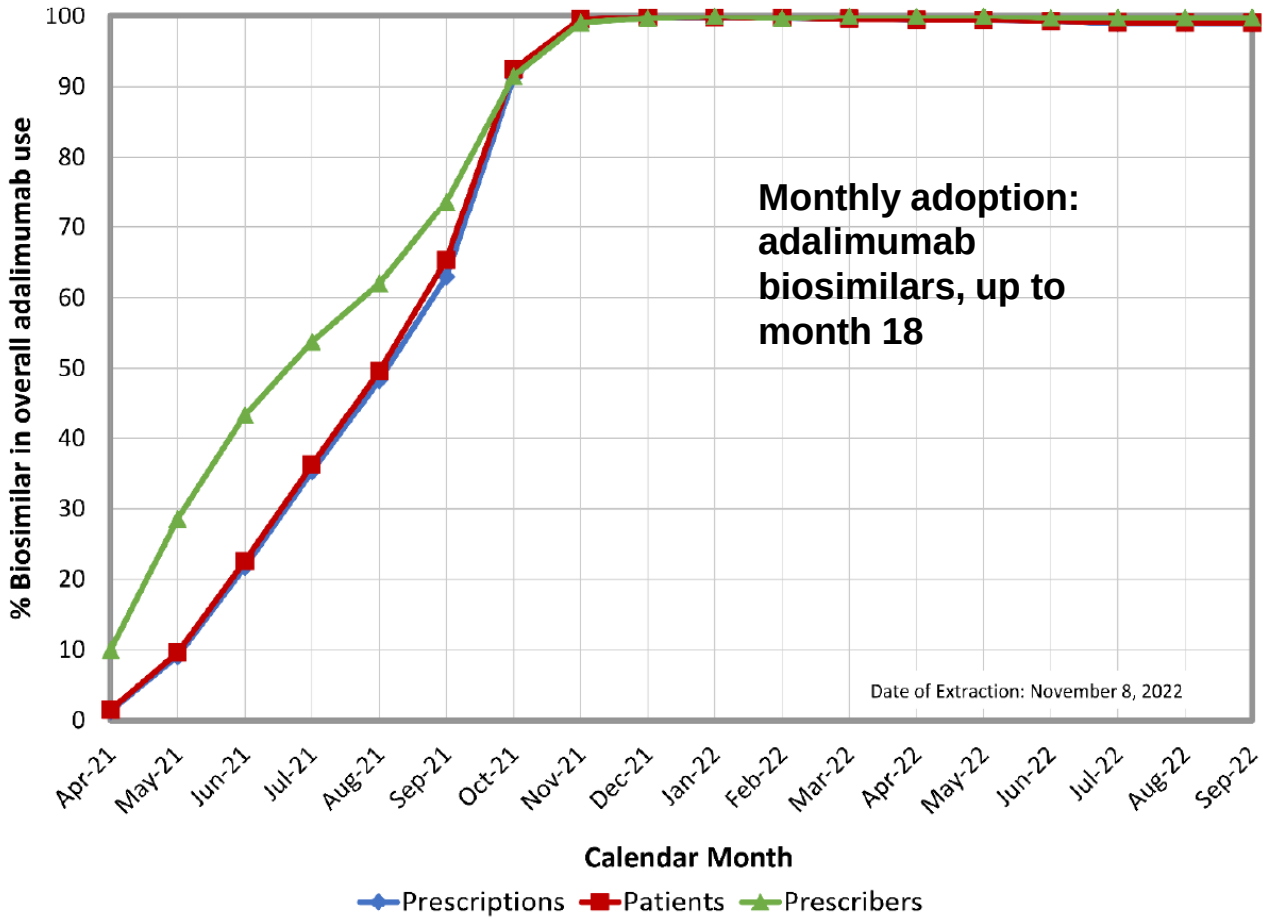
Adoption Patterns

- Rituximab: proportion of biosimilar prescription dispensations, patients and prescribers accepted by PharmaCare, all indications



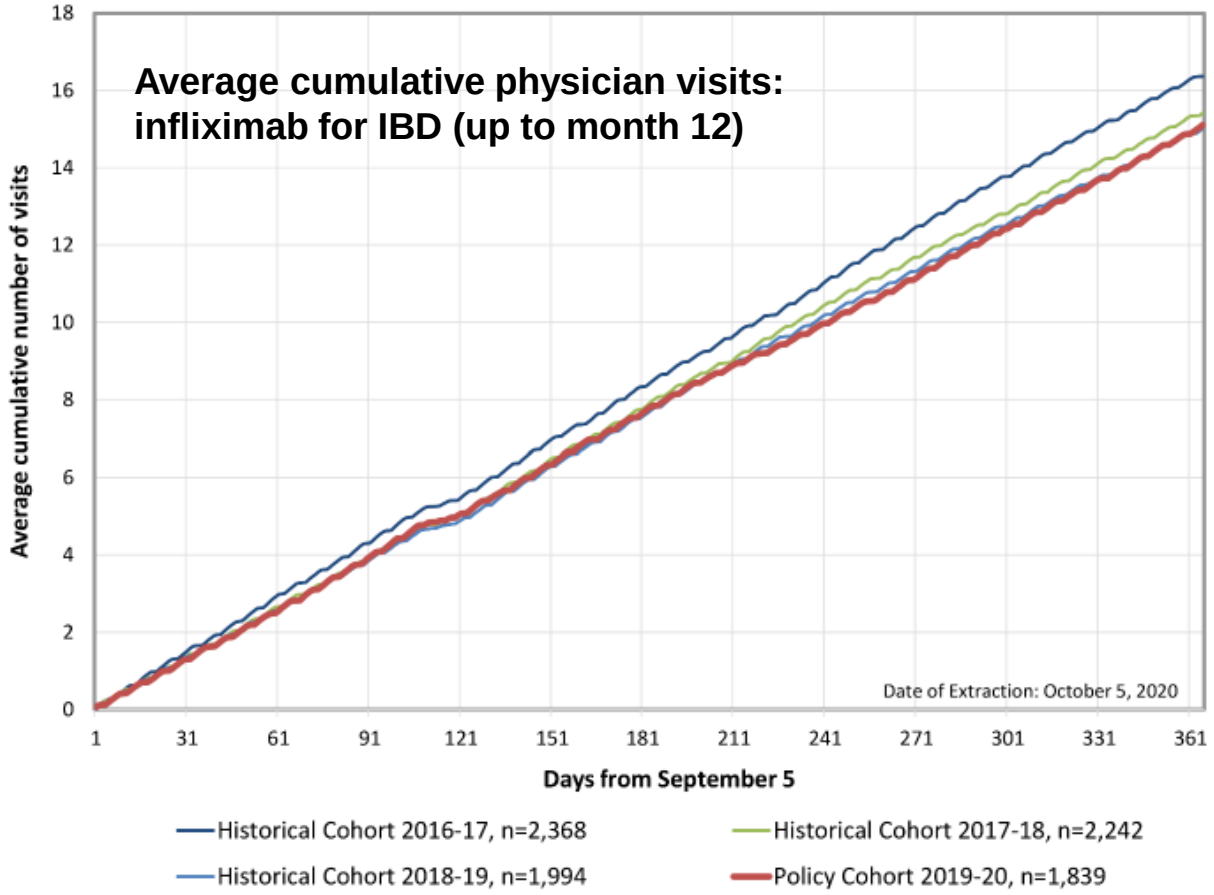
Adoption Patterns

- Adalimumab: proportion of biosimilar prescription dispensations, patients and prescribers accepted by PharmaCare, all indications



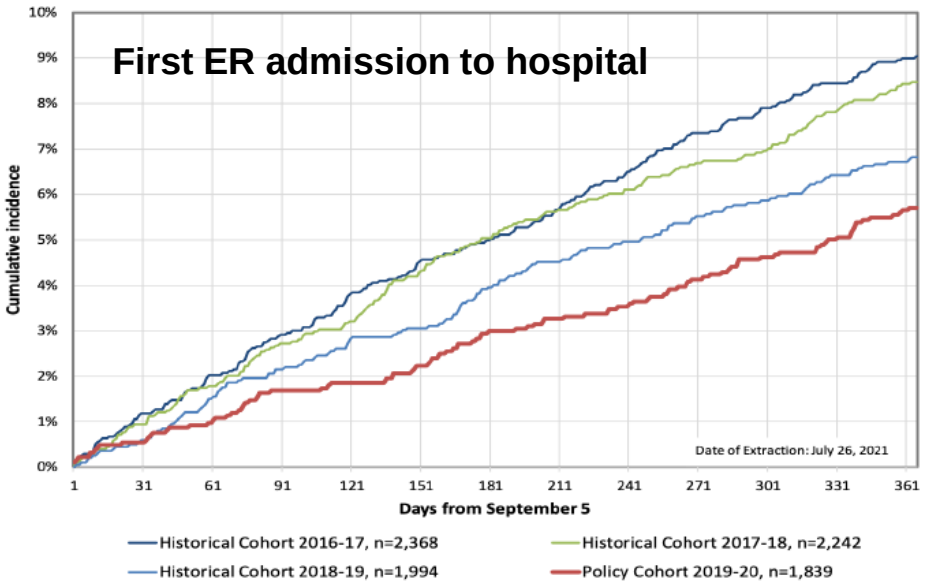
Healthcare utilization: infliximab for IBD

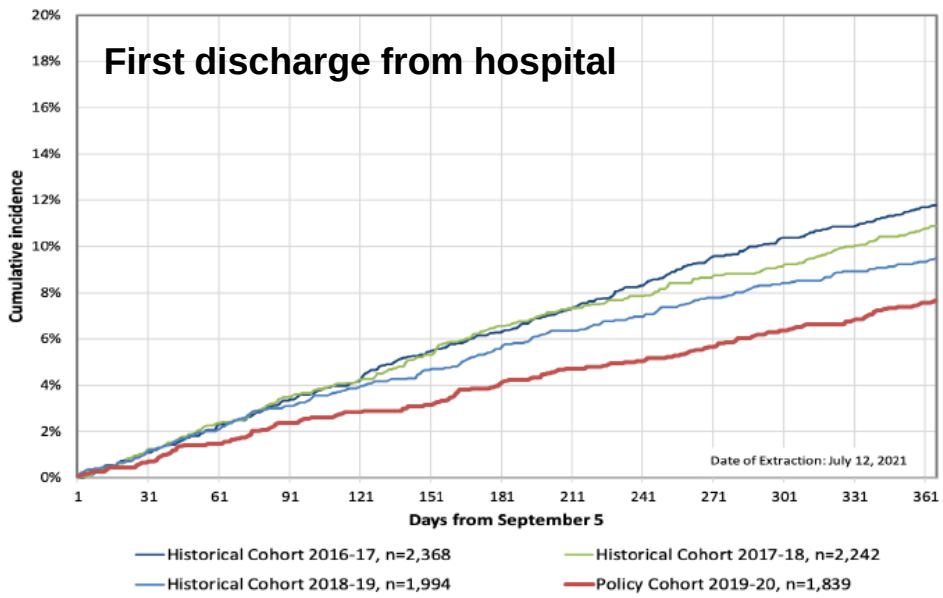
- No difference in outpatient physician visits observed when compared to historical cohorts at year 1 following policy



Healthcare utilization: infliximab for IBD

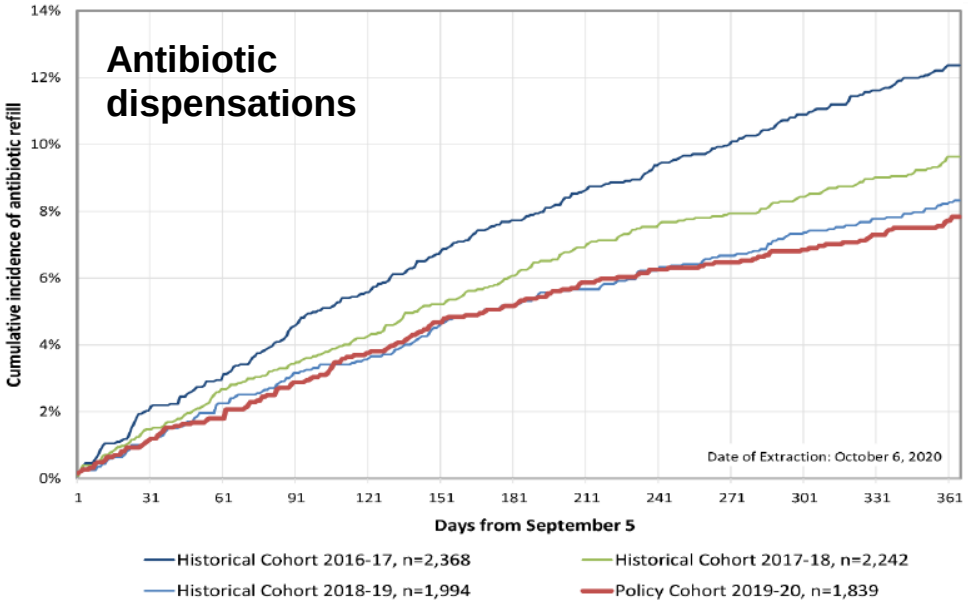
- Lower cumulative incidence of emergency admission to hospital and first discharge from hospital (month 12).

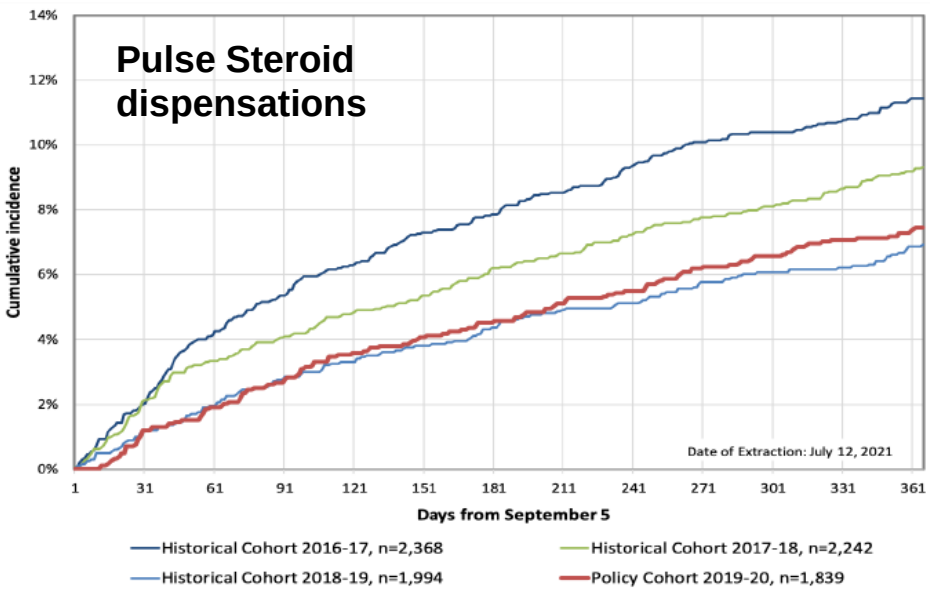




Policy-specific outcomes: infliximab for IBD

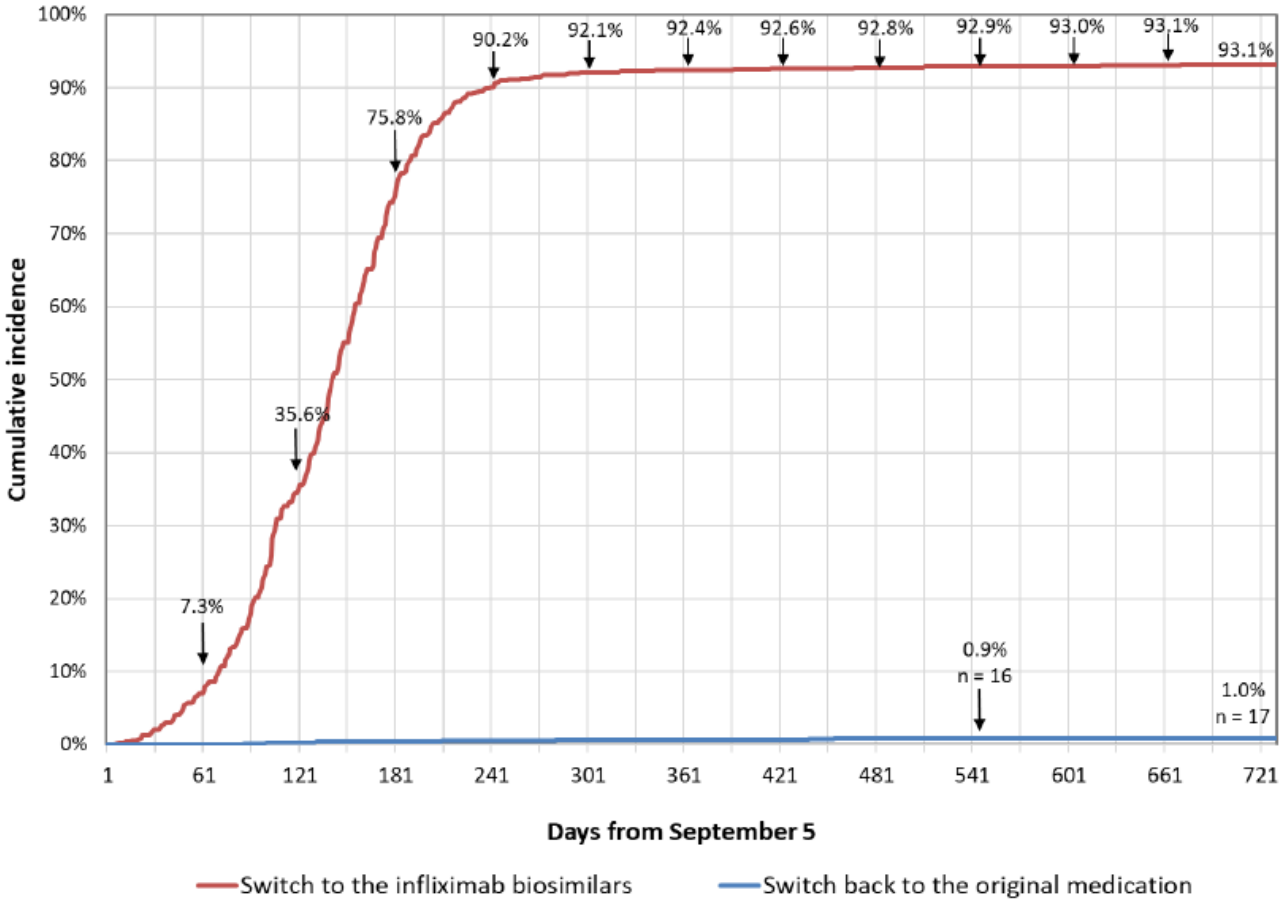
- No difference in cumulative dispensations of antibiotics or pulse steroid treatments (month 12) between biosimilar and historical cohorts of infliximab for IBD





Switch back to originator: infliximab adult IBD

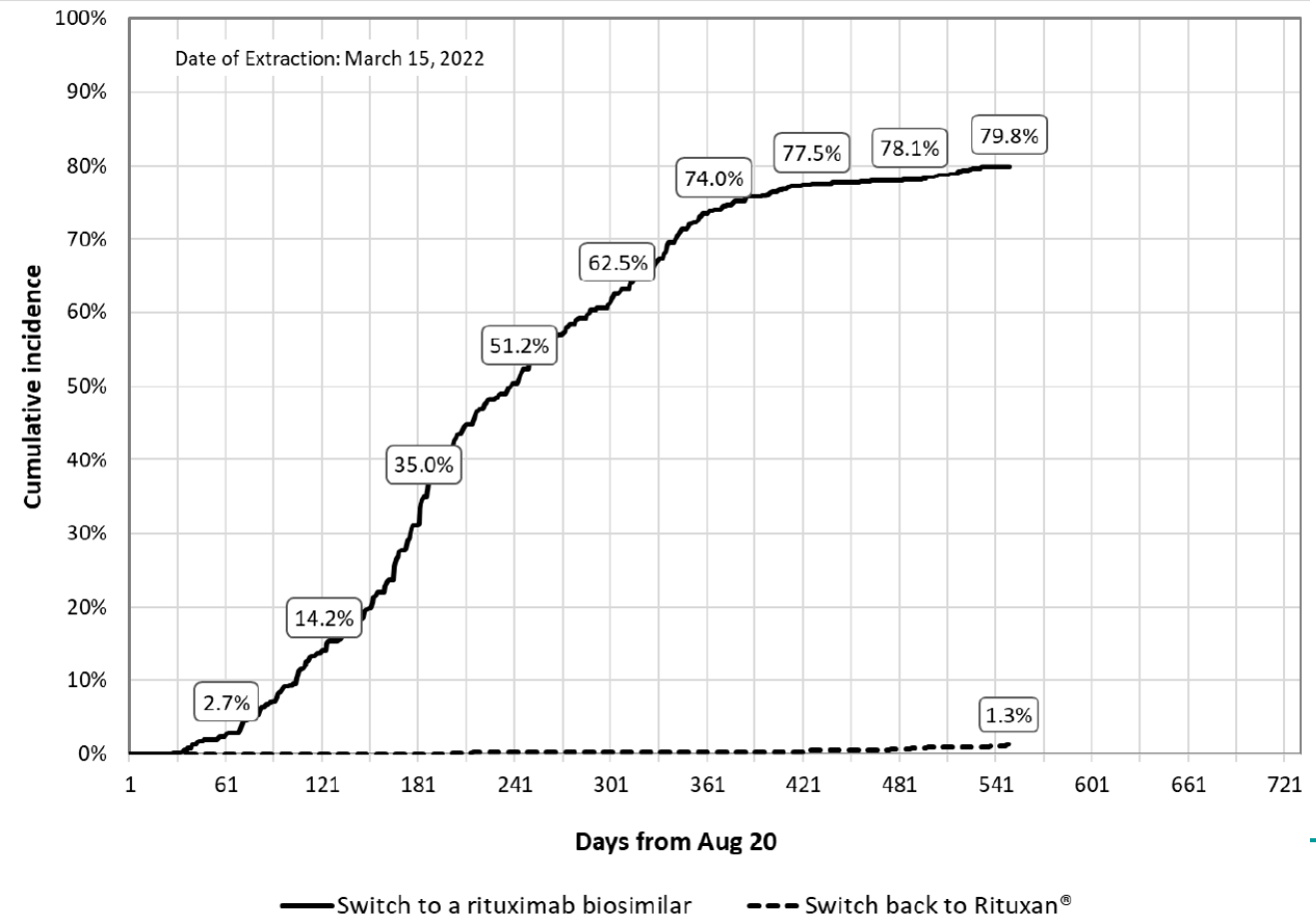
- At month 24, 1599 of 1717 (93%) of Remicade® users (≥ 18 y.o.) with a GI condition switched to a biosimilar. Only 17 (1%) of patients switched back to the originator.



Date of Extraction: September 14, 2021

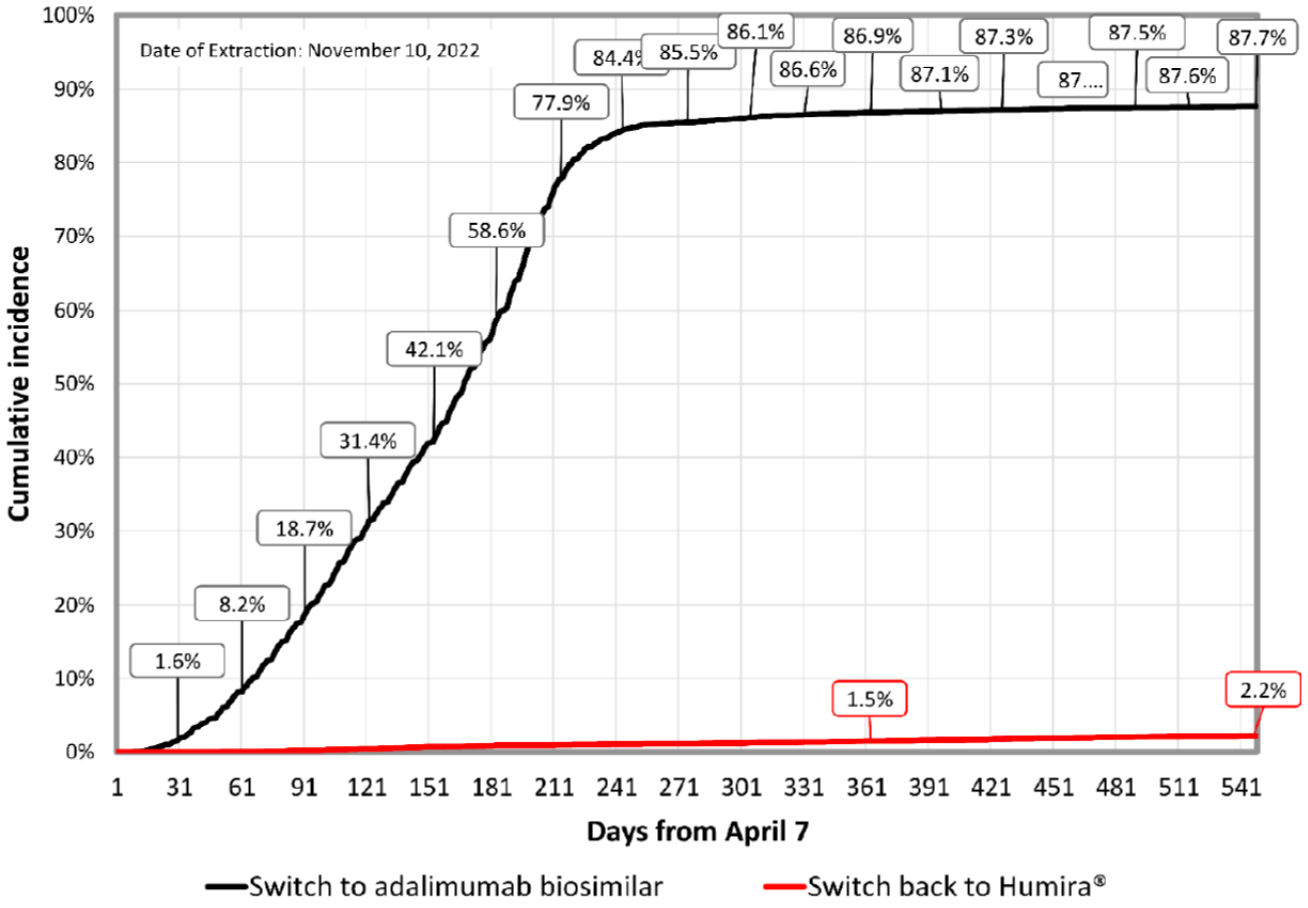
Switch back to originator: rituximab for RA

- At month 18, 507 of 635 (79.8%) of Rituxan® users with RA switched to a biosimilar. Only 8 (1.3%) patients switched back to the originator.



Switch back to originator: adalimumab

- At month 18, 4430 of 5052 (88%) of Humira® users switched to a biosimilar, of which 111 (2.2%) patients switched back to the originator.



Policy-specific outcomes: infliximab adult IBD

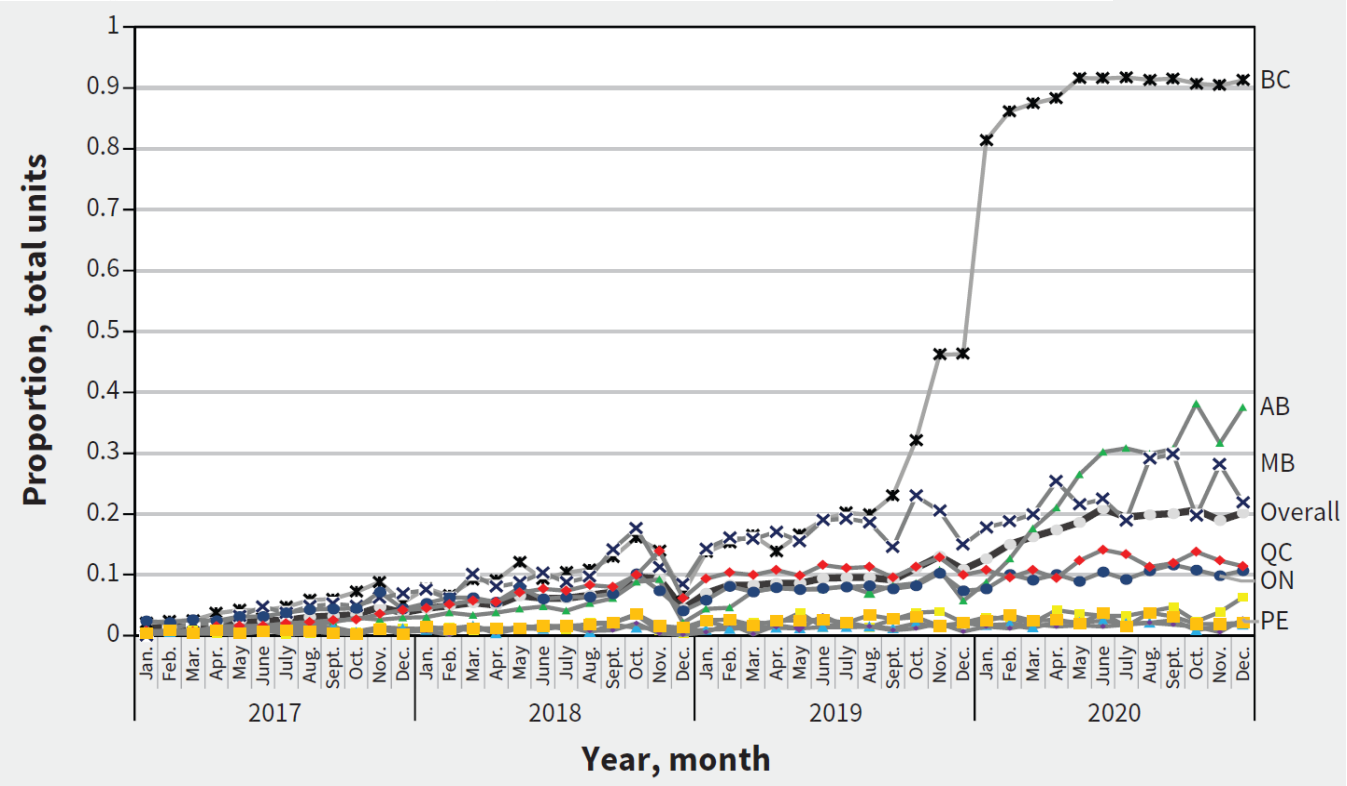
- By month 24, 118 patients in the policy cohort (7%) have not switched to biosimilar. Status of non-switchers:

Patients who switched away from infliximab to a different biologic DMARD or targeted synthetic medication	N = 58 (3.4% of policy cohort)
Patients who continued to fill Remicade® (with or without PharmaCare coverage)	N = 28 (1.6% of policy cohort)
Patients whose MSP enrolment ended (death, emigration etc.)	N = 3 (0.2%)
Patients who discontinued infliximab without switching to a different biologic DMARD	N = 29 (1.7%)

Uptake of biosimilar drugs in Canada: analysis of provincial policies and usage data

Alison R. McClean PharmD, Michael R. Law PhD, Mark Harrison PhD, Nick Bansback PhD, Tara Gomes PhD, Mina Tadrous PharmD PhD

Cite as: *CMAJ* 2022 April 19;194:E556-60. doi: 10.1503/cmaj.211478



Proportion of total units of infliximab biosimilar purchases from 2017 to 2020 across provinces in Canada using data from IQVIA Canadian Drugstore and Hospital Purchases Audit

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Impact of Biosimilar Coverage policy

- Majority of patients transitioned from biologics to biosimilars
- Savings from biosimilars continue to be reinvested into new treatment options and improvements in patient care
- Recent examples of improved access to drug coverage:
  - **Coverage for continuous glucose monitors**
  - **Improved access to inhalers for Chronic Obstructive Pulmonary Disease**
  - **Change in coverage for rapid acting insulins from partial to full**
  - **Dapagliflozin for heart failure**
  - **Trikafta for cystic fibrosis**

Biosimilars Initiative Resources

www.gov.bc.ca/biosimilars/prescribers

www.gov.bc.ca/biosimilars/pharmacy

Biosimilars.Initiative@gov.bc.ca

1 844 915-5005 (Monday to Friday, 8:30 AM — 4:30 PM)

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McClean AR, Law MR, Harrison M, et al. Uptake of biosimilar drugs in Canada: analysis of provincial policies and usage data. CMAJ 2022 April 19;194:E556-60.

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