

Appendix I

Table S1: Data elements for studying the OHIP+ trends of publicly covered prescription utilization and expenditures

Data Element	Definition
Calendar Year/month	The calendar year and month during which a claim was dispensed.
Province	The provincial/jurisdiction responsible for financing the claim: <ul style="list-style-type: none"> • Ontario (ON) • British Columbia (BC)
Program Group	See Plans and Programs in the NPDUIS Database section for more detail A drug benefits plan/program to which the claim was submitted for payment.
Neighborhood Income Quintile	A grouping by the neighborhood income quintile (based on national distribution) associated with patient postal code. That is, Quintile 1 (Lowest income), 2, 3, 4, 5 (Highest Income), and 9 (Missing).
Patient Sex	The sex of the patient at the time of claim, and grouped as male, female, other.
Patient Age Category	The age of the patient at the time of claim (service date), grouped as 0-17, 18-25.
ATC level 5 code/description (only for diabetic and respiratory drugs)	An ATC code and English description is defined by the WHO Collaborative Centre for Drug Statistics Methodology and is assigned by Health Canada at the product level. Chemical substance — indicated by the full 7 characters of the ATC code.
PDIN flag (only for diabetic and respiratory drugs)	A flag that indicates whether the product is listed as a pseudo-drug identification number (PDIN). The drug identification number (DIN) or pseudo-DIN (PDIN) identifies drug products sold in a dosage form in Canada. DINs are assigned by Health Canada, and PDINs are assigned by the plan/program. If the PDIN Flag is Y, the value received is a PDIN. If the PDIN Flag is N, the value received is a DIN.
Form (only for diabetic and respiratory drugs)	A pharmaceutical dosage form description of drug products used within the CIHI database. It is derived from the Health Canada dosage form and modified using predetermined form-mapping rules to ensure standard reporting. For more information, see the CIHI Pharmaceutical Form Mapping For PDINs, this data element will be reported as blank. (https://www.cihi.ca/en/system/files/document/pharmaceutical_mapping2008_en.pdf) document.
Route of administration (only for diabetic and respiratory drugs)	The route of administration for the drug as reported in Health Canada Drug product Database. For PDINs, this data element will be reported as blank.
Strength (only for diabetic)	Standardized strength of a DIN for use in establishing the CIHI Uniform Description.

and respiratory drugs)	
# of Claims Accepted	The number of claims where the public plan/program accepted at least part of the claim, either toward a deductible (if applicable) or for payment for the given drug class.
# of Active Beneficiaries	The number of people from whom the public plan/program has accepted at least part of at least one claim for the given drug class, either toward a deductible (if applicable) or for payment.
# of Paid Beneficiaries	The number of people for whom the public plan/program paid at least part of at least 1 claim for the given drug class.
Program Paid Amount	The Amount from the total prescription cost accepted that is paid by the plan/program for the given drug class.
# of active beneficiaries (all drugs)	The number of individuals from whom the public plan/program has accepted at least part of at least one claim, either toward a deductible (if applicable) or for payment, for any drug product.
# of paid beneficiaries (all drugs)	The number of people for whom the public plan/program paid at least part of at least 1 claim for any drug product.
# of Claims Accepted (all drugs)	The number of claims where the public plan/program accepted at least part of the claim, either toward a deductible (if applicable) or for payment any drug.
Program Paid Amount (all drugs)	The Amount from the total prescription cost accepted is paid by the plan/program for any drug product.

Table S2: Top changes in asthma publicly covered prescription use volumes and plan expenditures pre-post policy changes

Ingredient-parameter	Period: no. of prescriptions and costs (monthly mean, %) change				
	Before 1 st policy	After 1 st policy	% change	After 2 nd policy	% change
Total no. beneficiaries	1864796 (77700)	8314971(554331)	+613.4	1822971 (260424)	-53.0
Prescriptions					
Overall prescriptions	6126278 (255262)	15280827 (1018722)	+299.1	3462439 (494634)	-51.5
Rate of use per 1000	756 (0.756)	2952 (2.952)		1421 (1.421)	
Overall plan costs	\$378864749 (15786031)	\$838556189(55903746)	+254.1	\$203827168(29118167)	-47.9
Rate of cost per 1000	\$162018 (46.02)	\$162018 (162.02)		\$1606 (1.61)	
Prescriptions (Asthma)					
Overall prescriptions	408517 (17022)	1617430 (107829)	+533.5	307354 (43908)	-59.3
Rate of use per 1000	50.5 (0.050395126)	313 (0.312504528)		26.2 (0.12614199)	
Beclomethasone-R01AD01	6149 (256)	18237(1216)	+375	4152 (593)	-51.2
Beclometasone-R03BA01	3790 (158)	15457 (1030)	+551.9	2204 (315)	-69.4
Budesonide-R01AD05	8632 (360)	47245 (3150)	+775	11194 (1599)	-49.2
Budesonide-R03BA02	3526 (147)	9673 (645)	+338.8	1577 (225)	-65.1
Fluticasone-R03BA05	90672 (3778)	417072 (27805)	+636	66651 (9522)	-65.8
Ciclesonide-R01AD13	36516 (1522)	64866 (4324)	+184.1	34324 (4903)	-13.3
Ciclesonide-R03BA08	9176 (382)	39957 (2664)	+597.4	5190 (741)	-72.2
Mometasone-R03BA07	51 (2)	1369 (91)	+4450	46 (7)	-92.3
Salbutamol-R03AC02	183504 (7646)	783621 (52241)	+585	133055 (19008)	-12.5
Terbutaline-R03AC03	1420 (59)	6233 (416)	+605.1	815 (116)	-72.1
Salmeterol and Fluticasone R03AK06	11039 (460)	30282 (2019)	+338.9	5265 (752)	-62.8
Vilanterol and Fluticasone- R03AK10	617 (26)	7921 (528)	+1930.7	1635 (234)	-55.7
Formoterol and Budesonide-R03AK07	8863 (369)	37085 (2472)	+569.9	7593 (1085)	-56.1

Appendix 1, as supplied by the authors. Appendix to: Miregwa BN, Holbrook A, Law MR, et al. The impact of OHIP+ 2 pharmacare on use and costs of public drug plans among children and youth in Ontario: a time-series analysis. *CMAJ Open* 2022. DOI:10.9778/cmajo.20210295. Copyright © 2022 The Author(s) or their employer(s). To receive this resource in an accessible format, please contact us at cmajgroup@cmaj.ca.

Formoterol&Mometasone-R03AK09	3733(156)	18618 (1241)	+695.5	3513 (502)	-59.5
Ipratropium-R03BB01	795 (33)	3146 (210)	+536.4	529 (76)	-63.8
Montelukast-R03DC03	5445 (227)	15407 (1027)	+352.4	2482 (355)	-65.4
Orciplenaline-R03CB03	4828 (201)	19783 (1319)	+556.2	4559 (651)	-50.6
Dornase Alpha-R05CB13	962 (40)	2023 (135)	+237.5	252 (36)	-73.3
Dextromerthaphan-R05DA09	15702 (654)	31652 (2110)	+222.6	11900 (1700)	-19.4
Diphenhydramine-R06AA02	8003 (333)	17651 (735)	+120.7	5012 (716)	-2.6
Hydrocodone-R05DA03	4505 (188)	21792 (1453)	+672.8	4317 (617)	-57.5
Codeine-R05DA04	439 (18)	1772 (118)	+555.5	186 (27)	-77.1
Omalizumab-R03DX05	28 (1)	2704 (180)	+17900	552 (79)	-56.1
Ivacafter-R07AX02	99 (4)	260 (17)	+325	0 (0)	-100
Aerochamber space-Z99RA	0 (0)	185892 (12393)		23468 (3353)	-72.9
Overall plan costs.	\$15731734 (\$655489)	\$67238185 (\$4482546)	+583.8	\$12598120 (\$1799731)	-19.7
Rate of use per 1000	\$1940 (\$1.94)	\$12990 (\$12.99)	+570	\$5170 (\$5.17)	-60.2
Beclomethasone-R01AD01	\$122363 (5098)	\$405212 (27014)	+429.9	\$92358 (13194)	-51.2
Beclametasone-R03BA01	\$250317 (10430)	\$1121540 (74769)	+616.9	\$164383 (23483)	-68.6
Budesonide-R01AD05	\$172632 (7193)	\$1095071 (73005)	+914.9	\$ 242762.2 (34680)	-52.5
Budesonide-R03BA02	\$250021 (10418)	\$595913 (39728)	+281.3	\$94623 (13518)	-66.0
Fluticasone-R03BA05	\$4875066 (203128)	\$23343277 (1556219)	+666.1	\$3897955 (556851)	-64.2
Ciclesonide-R01AD13	\$1149776.4 (47907.4)	\$2291242.7 (152749.5)	+218.8	\$1264963.4 (180709.1)	-1.8
Ciclesonide-R03BA08.	\$711651 (29652)	\$ 3273336 (218222)	+635.9	\$433617 (61945)	-71.6
Mometasone-R03BA07	\$ 2456 (102)	\$75830 (5055)	+4855.9	\$2344 (335)	-93.4
Salbutamol-R03AC02	\$2368844 (98702)	\$11724678 (781645)	+691.9	\$2003273 (286182)	-63.4
Terbutaline-R03AC03	\$23422 (976)	\$102430 (6829)	+599.7	\$15934 (2276)	-66.7
Salmeterol and Fluticasone-R03AK06	\$1486467 (61936)	\$4431383 (295426)	+377	\$789896 (112842)	-61.8
Vilanterol and Fluticasone – R03AK10	\$81931 (3414)	\$1185960 (79064)	+2215.8	\$258278 (36897)	-53.3
Formoterol and Budesonide R03AK07	\$ 922022 (38418)	\$4279245 (285283)	+ 642.6	\$890443 (127206)	-55.4
Formoterol & mometasone R03AK09	\$475305 (19804)	\$2505775 (167052)	+743.5	\$487750 (69679)	-88.1
Ipratropium-R03BB01	\$25720 (1072)	\$6827 (102403)	+9452	\$17331 (2476)	-97.6
Tiotropium-R03BB04	\$8005 (334)	\$79666 (5311)	+1490	\$17742 (2535)	-52.3
Montelukast-R03DC03	\$121518 (5063)	\$375280 (25019)	+394.2	\$59781 (8540)	-65.9
Orciplenaline-R03CB03	\$67918 (2830)	\$321932 (21462)	+658.4	\$71892 (10270)	-52.1
Dornase Alpha-R05CB13	\$1571063 (65461)	\$3657515 (243834)	+ 272.4	\$496557 (70937)	-70.9
Dextromerthaphan-R05DA09	\$157307 (6554)	\$378729 (25249)	+285.2	\$141932 (20276)	-19.7
Diphenhydramine-R06AA02	\$779522 (32480)	\$1199368 (79958)	+146.2	\$311338 (44476)	-44.4
Hydrocodone-R05DA03	\$61268 (2553)	\$327702 (21847)	+755.7	\$66061 (9437)	-56.8
Codeine-R05DA04	\$5116 (213)	\$21585 (1439)	+575.5	\$2183 (312)	-78.3
Omalizumab-R03DX05	\$41642 (1735)	\$ 4183232 (278882)	+15973.8	\$765228 (109318)	-60.8
Ivacafter-R07AX02	\$807113 (33630)	\$2058609 (137241)	+308.1	\$0 (0)	-100.
Aerochamber space-Z99RA	\$0 (0)	\$8547799 (569853)		\$1075567 (153652)	-73.0

Table S3: Top changes in diabetes publicly covered prescription use volumes and plan expenditure pre-post policy change

Ingredient-parameter	Period: no. of prescriptions and costs (%) change				
	Before 1 st policy	After 1 st policy	% change	After 2 nd policy	% change
Total no. beneficiaries	1864796 (77700)	8314971(554331)	+613.4	1822971 (260424)	-53.0
Prescriptions					
Overall prescriptions	6126278 (255262)	15280827 (1018722)	+299.1	3462439 (494634)	-51.5
Rate of use per 1000	756 (0.756)	2952 (2.952)		1421 (1.421)	
Overall plan costs	\$378864749(15786031)	\$838556189(55903746)	+254.1	\$203827168 (29118167)	-47.9
Rate of cost per 1000	\$46020 (46.02)	\$162018 (162.02)		\$1606 (1.61)	
Prescriptions (Diabetes)					
Overall prescriptions	69598 (2900)	172492 (11499)	+296.5	36471 (5210)	-54.7
Rate of use per 1000	8.58 (0.00858)	33.3 (0.03333)		14.9 (0.01497)	

Appendix 1, as supplied by the authors. Appendix 2: Miregwa BN, Holbrook A, Law MR, et al. The impact of OHIP+ 3 pharmacare on use and costs of public drug plans among children and youth in Ontario: a time-series analysis. *CMAJ Open* 2022. DOI:10.9778/cmajo.20210295. Copyright © 2022 The Author(s) or their employer(s). To receive this resource in an accessible format, please contact us at cmajgroup@cmaj.ca.

Insulin (A10A)	5391841 (224660)	17459280 (1163952)	+418.1	3297138 (471020)	-59.5
Insulin Aspart -A10AB05	18554 (773)	57313 (3821)	+394.3	8863 (1266)	-66.9
Insulin Glargine - A10AE04.	12159 (507)	29401 (1960)	+286.6	5192 (742)	-62.1
Insulin Lispro -A10AB04	10605 (442)	31924 (2128)	+381.4	5214 (745)	-65.0
Insulin(humansusp)- A10AC01	5311 (221)	7645 (510)	+130.8	1239 (177)	-65.3
Insulin Glulisine - A10AB06	340 (14)	1818 (121)	+764.3	318 (45)	-62.8
Insulin Detemir- A10AE05	3576 (149)	6128 (409)	+174.5	840 (120)	-70.7
Blood GL meds- (A10B)	414747 (17281)	1092027 (72802)	+321.3	330960 (47280)	-35.1
Metformin-A10BA02	14232 (593)	25542 (1703)	+187.2	8727 (1247)	-26.8
Metformin sitagliptin- A10BD07	1270 (53)	2731 (182)	+243.4	1106 (158)	-13.2
Glaclazide-A10BB09	1341 (56)	2034 (136)	+142.9	892 (127)	-6.6
Sitagliptin-A10BH01.	954 (40)	1116 (74)	+85.0	429 (61)	-17.6
Canagliflozin-A10BK02	1072 (45)	906 (60)	+33.0	211 (30)	-50.0
empagliflozin-A10BK03.	98 (4)	1596 (106)	+2500	655 (94)	-11.3
teststrips-Z99AA	36029 (1501)	87831 (5855)	+290.1	14272 (2039)	-65.2
Overall plan costs.	\$5806588 (241941)	\$18551307 (1236754)	+411.2	\$3628098 (518300)	-58.1
Rate of use per 1000	\$716.31 (0.71631)	\$3584.3(3,58431)		\$1489.02 (1.48902)	
Insulin (A10A)	\$5391841 (224660)	\$ 17459280 (1163952)	+418.1	\$3297138 (471020)	-59.5
Insulin aspart -A10AB05	\$1804849 (75202)	\$6758411 (450561)	+499.1	\$1066830 (152404)	-66.2
Insulin Glargine - A10AE04	\$1641723 (68405)	\$4570759 (304717)	+345.5	\$824965 (117852)	-61.3
Insulin lispro -A10AB04	\$924483 (38520)	\$3513537 (234236)	+508.1	\$588106 (84015)	-64.1
Insulin(humansusp)- A10AC01	\$379536 (15814)	\$615104 (41007)	+159.3	\$103675 (14811)	-63.9
Insulin detemir- A10AE05	\$606615 (25276)	\$1135139 (75676)	+199.4	\$157560 (22509)	-70.3
Insulin Glulisine - A10AB06	\$28803 (1200)	\$173455 (11564)	+863.7	\$32635 (4662)	-59.7
BGLM - A10B	\$414747 (17281)	\$1092027 (72802)	+321.3	\$330960 (47280)	-35.1
Metformin-A10BA02	\$122944 (5123)	\$252900 (16860)	+229.1	\$71455 (10208)	-39.5
Metformin-sitagliptin- A10BD07	\$112213 (4676)	\$325714 (21714)	+364.3	\$115665 (16524)	-23.9
Glaclazide-A10BB09	\$14298 (596)	\$21832 (1455).	+144.1	\$8306 (1187)	-18.4
Sitagliptin-A10BH01.	\$ 81059(3377)	\$ 156011 (10401)	+207.9	\$50930 (7276)	-30.1
Canagliflozin-A10BK02	\$70096 (2921)	\$89951 (5997)	+105.3	\$18797 (2685)	-55.2
Empagliflozin-A10BK03.	\$8785 (366)	\$176536 (11769)	+3100.2	\$56926 (8132)	-30.9
Dapagliflozin-A10BK01	\$3856 (161)	\$51501 (3433)	+2032.2	\$5075 (725)	-78.9
Teststrips-Z99AA	\$4513868 (188078)	\$13466558 (897771)	+377.3	\$2063280 (294754)	-67.2

Figure S1: Average monthly number of prescriptions where at least a portion was paid by the benefits plan, before and after the first and second OHIP+ policy intervention changes in January 2018 and April 2019. The solid lines represent the estimated monthly rates, and dashed lines (counterfactual) represent predicated estimates.

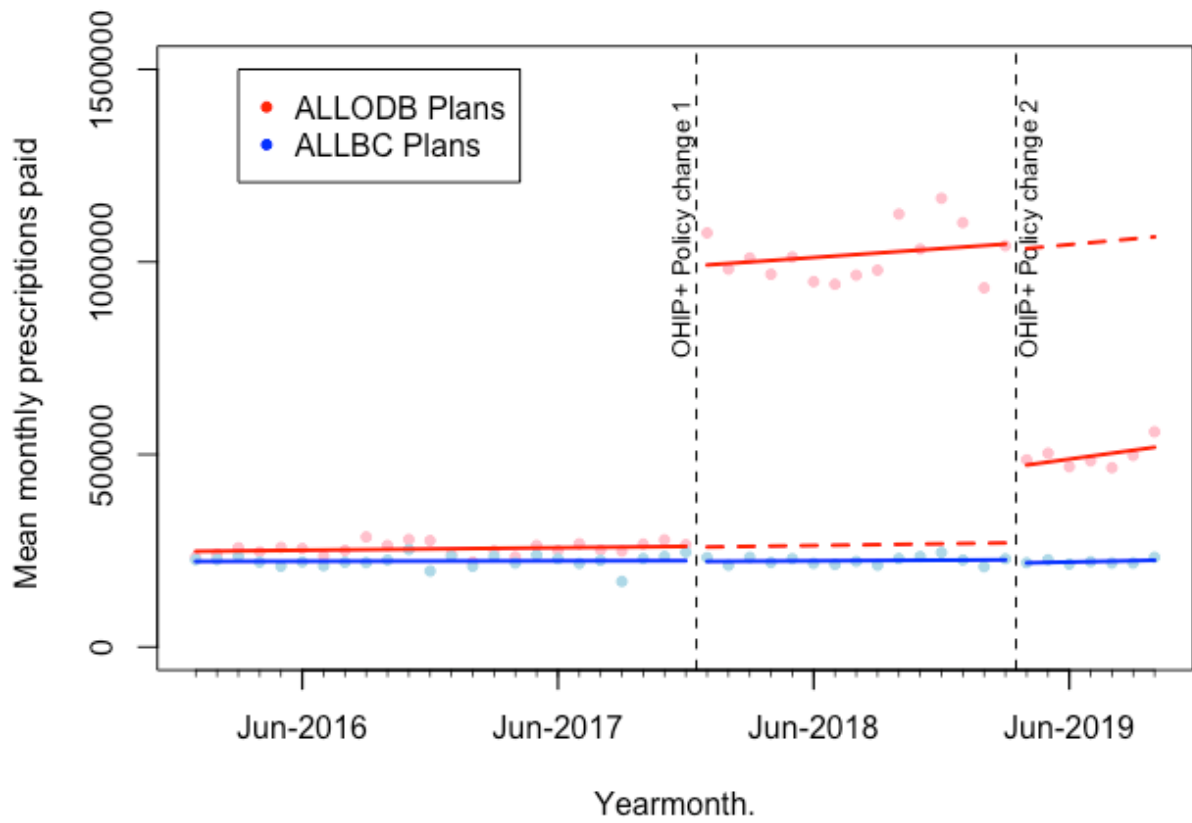


Figure S2: Interrupted time-series analysis of overall reimbursed dollars per month before and after the first and second OHIP+ policy intervention changes in January 2018 and April 2019. The solid lines represent the estimated monthly rates, and dashed lines (counterfactual) represent predicated estimates.

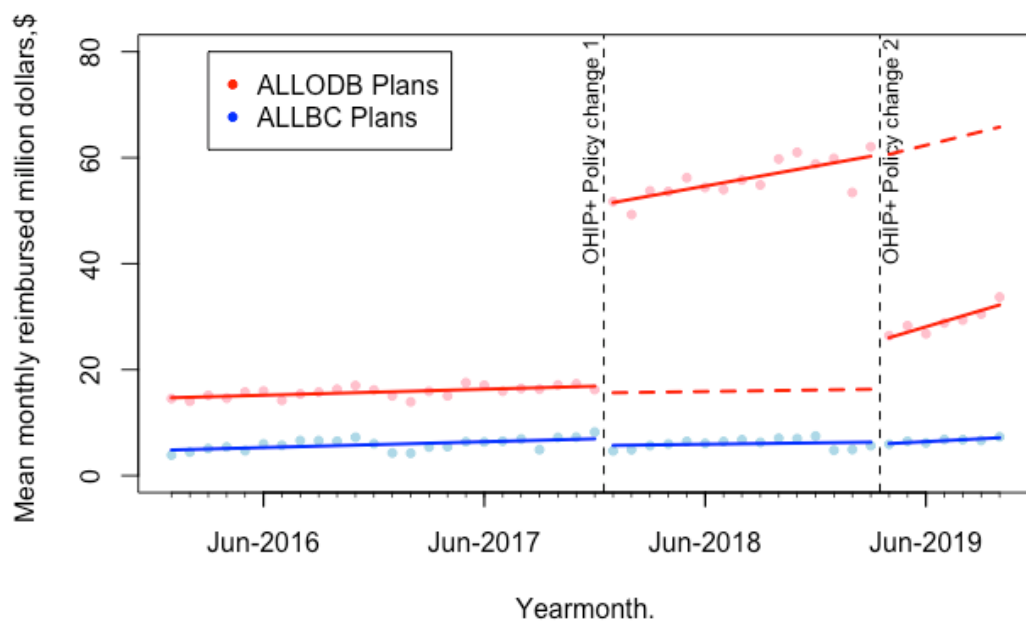


Figure S3: Average monthly number of asthma medication prescriptions per person per population where at least a portion was paid by the benefits plan, before and after the first and second OHIP+ policy intervention changes in January 2018 and April 2019. The solid lines represent the estimated monthly rates, and dashed lines (counterfactual) represent predicted estimates.

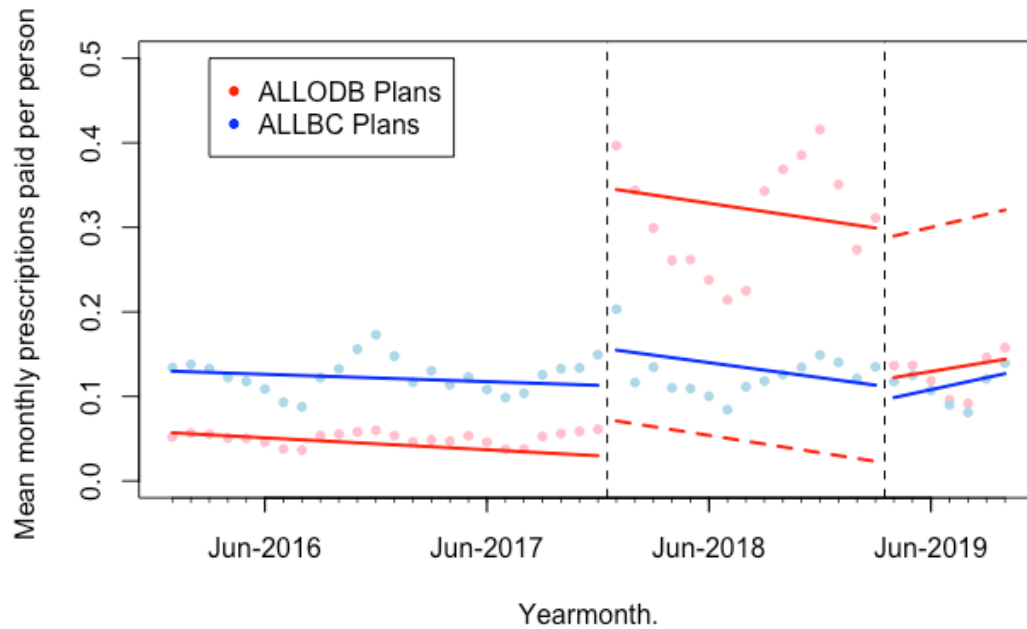


Figure S4: Interrupted time-series analysis of asthma medication reimbursed dollars per person per population before and after the first and second OHIP+ policy intervention changes in January 2018 and April 2019. The solid lines represent the estimated monthly rates, and dashed lines (counterfactual) represent predicted estimates.

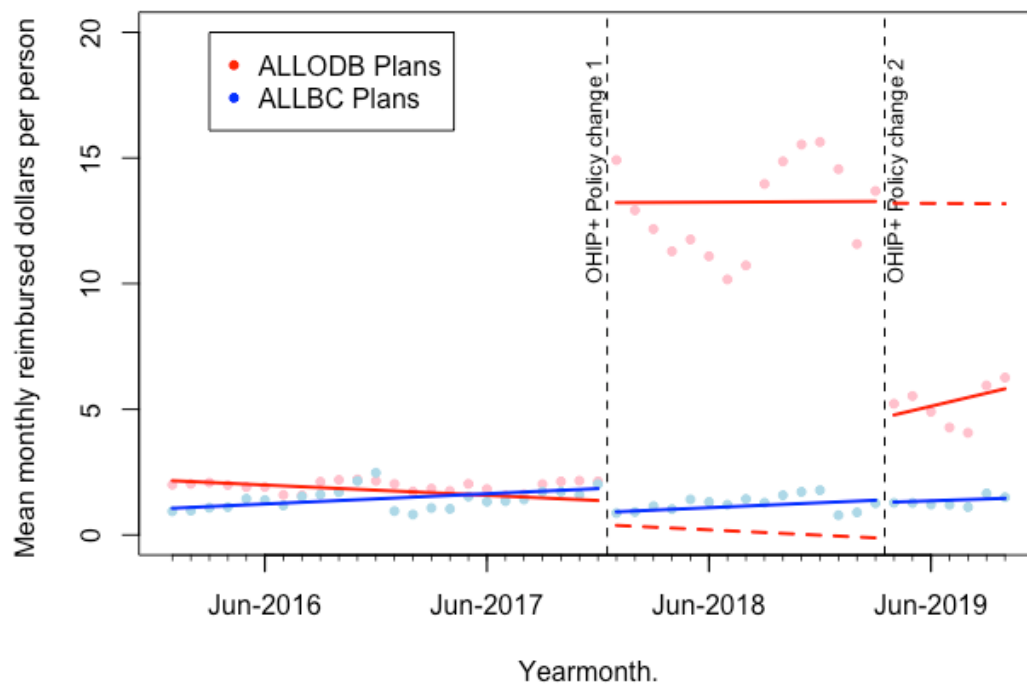


Figure S5: Average monthly number of diabetes publicly covered prescriptions per person per population where at least a portion was paid by the benefits plan, before and after the first and second OHIP+ policy intervention changes in January 2018 and April 2019. The solid lines represent the estimated monthly rates, and dashed lines (counterfactual) represent predicted estimates.

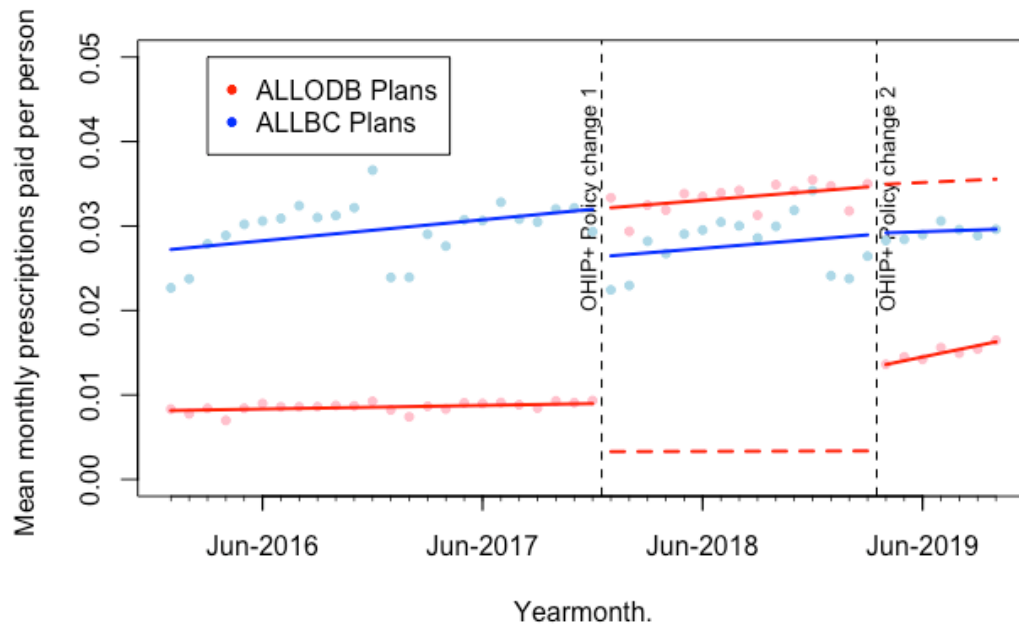


Figure S6: Interrupted time-series analysis of diabetes publicly covered medication reimbursed dollars per person per population before and after the first and second OHIP+ policy intervention changes in January 2018 and April 2019. The solid lines represent the estimated monthly rates, and dashed lines (counterfactual) represent predicted estimates.

