

Prescribed Drug Spending in Canada, 2017

A Focus on Public Drug Programs



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Please note that the analyses and conclusions in this document do not necessarily reflect those of the organizations mentioned above.

About CIHI

The Canadian Institute for Health Information (CIHI) is an independent, not-for-profit organization that provides essential information on Canada's health systems and the health of Canadians.

We provide comparable and actionable data and information that are used to accelerate improvements in health care, health system performance and population health across Canada. Our stakeholders use our broad range of health system databases, measurements and standards, together with our evidence-based reports and analyses, in their decision-making processes. We protect the privacy of Canadians by ensuring the confidentiality and integrity of the health care information we provide.

Highlights

Public drug program spending accounts for 42.7% of prescribed drug spending in Canada. This report provides an in-depth look at public drug program spending using data from the 11 jurisdictions currently reporting to CIHI's National Prescription Drug Utilization Information System (NPDUIS). Public drug program spending in these jurisdictions represents roughly two-thirds of the total public drug spending reported in CIHI's annual National Health Expenditure (NHEX) Trends figures. Public drug program spending does not include spending on drugs dispensed in hospitals or on those funded through cancer agencies and other special programs.

Public drug program spending in the 11 jurisdictions studied increased by 4.5% in 2016 compared with a 9.3% increase in 2015.

- New and expensive hepatitis C drugs accounted for almost two-thirds of growth in 2015. Excluding hepatitis C drugs, drug program spending increased by 3.6% in 2015 and by 4.2% in 2016.
- Tumour necrosis factor alpha inhibitors (anti-TNF drugs) and other antivirals hepatitis C drugs accounted for 95.8% of spending in this class were the top 2 contributors to growth in 2016, accounting for 20.8% and 12.6% of growth, respectively.
- Oral protein kinase inhibitors (used to treat various types of cancer) and direct Xa factor antagonists (a class of anticoagulants) were the next highest contributors to growth.
- Generic products accounted for 31.6% of public drug program spending in 2016, down from 34.8% in 2011 and 32.1% in 2015.

Biologics to treat conditions such as rheumatoid arthritis and Crohn disease continue to account for the highest proportion of drug spending.

• Anti-TNF drugs accounted for 8.7% of public drug program spending in 2016, the fifth consecutive year they have accounted for the highest proportion of spending. Other antivirals accounted for the next highest proportion (5.7%).

The proportion of public drug program spending on high-cost individuals continues to rise.

- In 2016, the 2% of individuals for whom a drug program paid \$10,000 or more accounted for about one-third of spending.
- The proportion of drug program spending on chemicals with an average cost of \$10,000 or more per individual accounted for one-quarter of spending in 2016.
- Among chemicals costing more than \$10,000 per paid individual, anti-TNFs and hepatitis C drugs accounted for 5 of the top 6 chemicals.

Introduction

To support drug program management and decision-making, there is an ongoing need for detailed information about drug use and expenditure.

This report provides an in-depth look at public drug program spending in 2016 using drug claims data submitted to CIHI's National Prescription Drug Utilization Information System (NPDUIS) by 9 provinces and 1 territory — Newfoundland and Labrador, Prince Edward Island, Nova Scotia, New Brunswick, Ontario, Manitoba, Saskatchewan, Alberta, British Columbia and Yukon — as well as 1 federal program administered by the First Nations and Inuit Health Branch (FNIHB). Public drug program spending in these jurisdictions represents roughly 67% of the total public drug spending reported in CIHI's annual National Health Expenditure (NHEX) Trends¹ figures. Public drug program spending does not include spending on drugs dispensed in hospitals or on those funded through cancer agencies and other special programs.

Spending on prescribed drugs continues to rise and is forecast to have reached \$33.9 billion in 2017, an increase of 5.5% over the previous year.¹ Although growth rates have not returned to historical levels — prescribed drug spending grew at an average rate of 10.6% per year between 1985 and 2005, and at 7.6% between 2005 and 2010 — they have risen since 2014, as the savings from patent expirations and generic pricing policies are no longer leading to significant reductions in year-over-year growth.^{2–5} The introduction of new and expensive chemicals to treat hepatitis C has also contributed significantly to growth in recent years.⁶

Multiple payers are involved in the financing of prescribed drugs. In the public sector, these payers include provincial/territorial and federal drug subsidy programs and social security funds (such as workers' compensation boards). In the private sector, payers include private insurers and households or individuals paying out of pocket.

In 2017, \$14.5 billion (42.7%) of prescribed drug spending is expected to have been financed by the public sector. This reflects an annual increase of 5.8%, compared with 5.4% growth in private-sector spending. The public share of prescribed drug spending varied among provinces, ranging from 29.1% in New Brunswick and 32.6% in Prince Edward Island to 46.3% in Alberta and 48.0% in Saskatchewan. In the private sector, prescribed drug spending financed by private insurers was \$12.1 billion (35.5%), with the remaining \$7.4 billion (21.8%) financed by Canadian households.

Public drug program spending by broad therapeutic category

Public drug program spending in 2016 in the 11 jurisdictions was almost \$9.2 billion, an increase of 4.5% compared with an increase of 9.3% in 2015 (see Appendix A). In 2015, the 9.3% spike in spending following the 3.5% growth in 2014 was due to the substantial increase in spending on new hepatitis C drugs, which were introduced in 2014. Excluding these drugs, there has been fairly steady growth in spending, with rates of 3.2% in 2013, 3.5% in 2014, 3.6% in 2015 and 4.2% in 2016.

Spending by broad therapeutic category provides a high-level overview of the types of conditions that account for drug spending. Broad therapeutic categories are regarded as groups of different chemicals that act on the same organ or system (see the Methodological Notes).

Among 14 broad therapeutic categories, the top 2 categories — antineoplastic and immunomodulating agents and nervous system drugs — accounted for 36.1% of total public drug program spending (Table 1).

A total of \$348.0 million (3.8% of public drug program spending) was spent on non-drug products. Diabetic supplies accounted for the highest proportion of non-drug spending at 60.4%. Pharmaceutical services such as medication reviews and immunizations were second, accounting for 22.5% of non-drug spending.

Table 1Percentage of public drug program spending and rate of use,
by broad therapeutic category, selected jurisdictions,* 2016

Broad therapeutic category	TPS (\$ millions)	Proportion of TPS (%)	Rate of use (%)
Antineoplastic and immunomodulating agents	1,666.7	18.1	3.1
Nervous system	1,658.5	18.0	45.0
Cardiovascular system	1,126.9	12.3	47.2
Alimentary tract and metabolism	1,112.0	12.1	35.9
Antiinfectives for systemic use	888.9	9.7	50.2
Respiratory system	555.9	6.0	22.0
Sensory organs	529.1	5.8	12.2
Blood and blood-forming organs	423.4	4.6	13.2
Musculoskeletal system	257.2	2.8	23.7
Genitourinary system and sex hormones	177.9	1.9	14.9
Systemic hormonal preparations	142.2	1.5	19.3
Dermatologicals	93.9	1.0	21.5
Various	74.6	0.8	0.7
Antiparasitic products, insecticides and repellents	14.2	0.2	4.0
Unassigned ⁺	129.7	1.4	2.8
Non-drug products	348.0	3.8	19.0
Total	9,199.1	100.0	n/a

Notes

^t The 11 jurisdictions submitting claims data to NPDUIS as of July 2017 are Newfoundland and Labrador, Prince Edward Island, Nova Scotia, New Brunswick, Ontario, Manitoba, Saskatchewan, Alberta, British Columbia, Yukon and the First Nations and Inuit Health Branch.

† This category includes products without an assigned Anatomical Therapeutic Chemical (ATC) code.

TPS: Total program spending.

n/a: Not applicable.

Source

National Prescription Drug Utilization Information System, Canadian Institute for Health Information.

In general, the distribution of spending across broad therapeutic categories was similar across jurisdictions, with antineoplastic and immunomodulating agents and nervous system drugs accounting for the 2 highest proportions of spending in 7 of the 11 jurisdictions and appearing in the top 3 broad therapeutic categories in all jurisdictions except Yukon and FNIHB (see Appendix B). Many factors can influence the distribution of spending, including the drug program design, the health of the population covered, formulary coverage and prescribing patterns. For a more comprehensive list of factors, see the Methodological Notes.

Drug classes that contributed to spending and growth

This section looks at drug classes that accounted for the highest proportion of public drug program spending (Table 2) in 2016, as well as those that contributed the most to the growth in spending in 2016 (Table 3). Spending by drug class provides more detail on the conditions being treated. Drug classes are regarded as groups of different chemicals that act in the same way to treat similar medical conditions.

5 of the top 10 drug classes in terms of public drug program spending act on either the cardiovascular system or the nervous system (Table 2). These top 10 drug classes accounted for 34.9% of drug program spending in 2016, compared with 36.0% in 2015.⁶ For the fifth consecutive year, anti-TNF drugs (used to treat conditions such as rheumatoid arthritis and Crohn disease) accounted for the highest proportion of spending, followed by other antivirals (hepatitis C drugs accounted for 95.8% of spending in this drug class). There were no new drug classes in the top 10 for 2016, although there were some changes within the order. Most notably, other antipsychotics — which includes Invega (paliperidone), Abilify (aripiprazole) and Risperdal (risperidone) — moved from 10th to 6th, while proton pump inhibitors (PPIs) moved from 5th to 7th, following a 21.8% decrease in spending in 2016.

Table 2Top 10 drug classes by public drug program spending,
selected jurisdictions,* 2016

Drug class	Common uses	TPS (\$ millions)	Proportion of TPS (%)	Rate of use (%)	TPS per paid beneficiary (\$)
Tumour necrosis factor alpha inhibitors (anti-TNF drugs)	Rheumatoid arthritis, inflammatory bowel disease, Crohn disease	801.4	8.7	0.5	19,163
Other antivirals ⁺	Hepatitis C, HIV	524.6	5.7	0.1	47,050
Antineovascularization agents [‡]	Age-related macular degeneration, secondary and diabetic macular edema	411.4	4.5	0.5	9,001
HMG-CoA reductase inhibitors (statins)	High cholesterol	260.8	2.8	26.7	130
Adrenergics in combination with corticosteroids or other drugs, excluding anticholinergics	Asthma, emphysema, chronic bronchitis	233.9	2.5	4.6	621
Other antipsychotics	Schizophrenia, bipolar disorder	217.4	2.4	2.0	1,289
Proton pump inhibitors (PPIs)	Gastroesophageal reflux disease, peptic ulcer disease	198.2	2.2	18.6	132
Angiotensin-converting enzyme (ACE) inhibitors, excluding combinations	Congestive heart failure, high blood pressure	194.1	2.1	15.6	173
Natural opium alkaloids	Management of moderate to severe pain	185.9	2.0	14.7	203
Other antidepressants	Depression, anxiety	179.9	2.0	9.3	265
Combined top 10		3,207.6	34.9	n/a	n/a

Notes

* The 11 jurisdictions submitting claims data to NPDUIS as of July 2017 are Newfoundland and Labrador, Prince Edward Island, Nova Scotia, New Brunswick, Ontario, Manitoba, Saskatchewan, Alberta, British Columbia, Yukon and the First Nations and Inuit Health Branch.

† Spending on other antivirals in Prince Edward Island is not included in NPDUIS.

‡ Spending on ranibizumab and aflibercept (which accounted for 99.9% of spending on antineovascularization agents) in Nova Scotia, Manitoba and British Columbia, and the majority of this spending in Alberta, is funded through special programs and is not included in NPDUIS.

TPS: Total program spending.

HIV: Human immunodeficiency virus.

n/a: Not applicable.

Source

The increase in spending on "other antipsychotics" was driven by increased spending on aripiprazole and paliperidone, newer drugs in the class, which don't have lower-cost generic versions on the market. (A generic version of paliperidone was approved in early 2016 but has not yet come to market.) Risperidone, an older drug with generic alternatives, still accounted for two-thirds of the claims but for only one-quarter of spending for the "other antipsychotics" class.

The decrease in PPI spending was largely due to price decreases for pantoprazole, which accounted for 46.7% of PPI spending in 2016. The cost of pantoprazole decreased from \$182 per paid beneficiary in 2015 to \$112 in 2016.

Biologics

Public drug program spending on biologics continues to increase, accounting for 22.1% of total spending in 2016, compared with 21.6% in 2015 and 14.8% in 2011. 2 of the top 10 classes in terms of public drug program spending are biologic drugs: anti-TNF drugs and antineovascularization agents (used to treat age-related macular degeneration).

Anti-TNF drugs accounted for the highest proportion of public drug program spending, at 8.7%, and were the highest contributor to spending growth, accounting for 20.8%, while antineovascularization agents accounted for 4.5% of spending. The overall contribution to growth of antineovascularization agents was underestimated in 2015 due to a change in coverage in Alberta. Excluding Alberta from the calculation, they would have appeared in the top 10 (Table 3). Each of these classes was used by only 0.5% of beneficiaries but has a high cost per patient (anti-TNFs cost drug programs roughly \$19,000 per paid beneficiary, while antineovascularization agents cost roughly \$9,000).

Anti-TNF drugs accounted for the largest share of drug program spending in every province except Ontario, where they accounted for the second-largest share after antineovascularization agents (see Appendix F). Almost all (99.9%) program spending on antineovascularization agents was for Lucentis (ranibizumab) and Eylea (aflibercept) in 2016. Public spending on ranibizumab and aflibercept in Nova Scotia, Manitoba and B.C., and the majority of this spending in Alberta, is through special programs that are not included in NPDUIS.

Hepatitis C drugs

New drugs used to treat hepatitis C, including Sovaldi (sofosbuvir) and Harvoni (ledipasvir/ sofosbuvir) — which were introduced in 2014 and account for 95.8% of spending in the "other antiviral" class — continued to be among the largest contributors to the growth in drug program spending. This class accounted for the second-highest proportion (5.7%) of drug program spending and contributed 12.6% to overall spending growth in 2016. Hepatitis C drugs remained a significant contributor to growth in 2016, even though growth in spending decreased significantly compared with 2015, the first year these drugs were widely reimbursed by public drug programs (see Appendix G).

Like the 2 biologic drug classes, other antivirals has a low rate of use (0.1% of beneficiaries). However, other antivirals had the highest average cost of any class in the top 10, at \$47,050 per paid beneficiary. Other antivirals appeared in the top 5 in terms of public drug program spending in 2016 in all jurisdictions except New Brunswick (see Appendix F).ⁱ

i. Spending on other antivirals in P.E.I. is not included in NPDUIS. P.E.I. spent \$1.6 million on its hepatitis C program in 2016; it would rank second among drug classes in terms of program spending.

Table 3Top 10 drug classes by contribution to public drug program spending
growth, selected jurisdictions,* 2016

Drug class	Common uses	Increase in TPS (\$ millions)	Contribution to TPS growth (%)	Annual rate of growth (%)
Tumour necrosis factor alpha inhibitors (anti-TNF drugs)	Rheumatoid arthritis, inflammatory bowel disease, Crohn disease		20.8	11.5
Other antivirals ⁺	Hepatitis C, HIV	50.2	12.6	10.6
Oral protein kinase inhibitors	Various types of cancer	47.4	11.9	43.0
Direct factor Xa inhibitors	Venous thromboembolism, stroke prevention, deep vein thrombosis prevention	43.3	10.9	38.2
Selective immunosuppressants	Various forms of arthritis, organ transplant, atypical hemolytic uremic syndrome	37.1	9.3	33.2
Other antipsychotics	Schizophrenia, bipolar disorder	33.3	8.4	18.1
Sodium–glucose co-transporter 2 (SGLT2) inhibitors	Type 2 diabetes mellitus	32.9	8.3	447.9
Other immunosuppressants	Rheumatoid arthritis, renal transplant, multiple myeloma	32.1	8.1	29.0
Oral blood glucose– lowering drugs, combinations	Type 2 diabetes mellitus	25.5	6.4	31.5
Interleukin inhibitors	Various forms of arthritis, psoriasis	14.9	3.7	29.1
All drug classes [‡]		397.8	100.0	4.5

Notes

* The 11 jurisdictions submitting claims data to NPDUIS as of July 2017 are Newfoundland and Labrador, Prince Edward Island, Nova Scotia, New Brunswick, Ontario, Manitoba, Saskatchewan, Alberta, British Columbia, Yukon and the First Nations and Inuit Health Branch.

† Spending on other antivirals in Prince Edward Island is not included in NPDUIS.

 Due to a change in the funding of ranibizumab and aflibercept (which accounted for 99.9% of spending on antineovascularization agents) in Alberta in 2016, growth in antineovascularization agent spending was underestimated. Excluding Alberta from the calculation, this drug class would have appeared in the top 10.

TPS: Total program spending.

HIV: Human immunodeficiency virus.

Source

Generic drugs

In 2016, generic products accounted for 31.6% of public drug program spending (Figure 1) — down from 34.8% in 2011 and 32.1% in 2015. Although the share of generic spending varies by jurisdiction, spending on generic products decreased as a proportion of drug program spending over the past 5 years in all jurisdictions (see Appendix C). Generic products increased as a share of utilization during this time period, accounting for 77.7% of accepted claims in 2016, up from 67.4% in 2011 and 75.8% in 2015.

Figure 1 Percentage share of public drug program spending and of accepted claims, by type of drug, selected jurisdictions,* 2016



Notes

* The 11 jurisdictions submitting claims data to NPDUIS as of July 2017 are Newfoundland and Labrador, Prince Edward Island, Nova Scotia, New Brunswick, Ontario, Manitoba, Saskatchewan, Alberta, British Columbia, Yukon and the First Nations and Inuit Health Branch.

TPS: Total program spending.

Source

National Prescription Drug Utilization Information System, Canadian Institute for Health Information.

The share of spending on generic products does not necessarily reflect the extent of use of generic products in place of brand name products, as generic alternatives are not available in all cases (most often when the brand name product is still under patent). For cases where generic products were available, generics accounted for 84.2% of spending and 92.2% of claims in 2016, up from 81.6% of spending and 89.7% of claims in 2015.

Differences in drug spending between seniors and non-seniors

The drug classes accounting for the majority of spending differed significantly between seniors and non-seniors. Only 1 drug class — anti-TNF drugs — appeared in the top 10 drug classes for both seniors (Table 4) and non-seniors (Table 5). Seniors accounted for 55.3% of total program spending in the 11 jurisdictions but for only 43.5% of active beneficiaries (see Appendix H).

Antineovascularization agents (used to treat age-related macular degeneration) accounted for the highest proportion of public drug program spending for seniors (7.6%). Seniors accounted for 94.1% of spending on this drug class, which reflects the difference in the prevalence of age-related macular degeneration between the 2 age groups.

Statins (used to treat high cholesterol) — the most commonly used drug class among seniors⁷ — ranked third, accounting for 4.2% of total spending. Oral protein kinase inhibitors (used to treat various types of cancer) is new to the seniors top 10 list in 2016.

Table 4Top 10 drug classes by public drug program spending on seniors,
selected jurisdictions,* 2016

Drug class	Common uses	TPS (\$ millions)	Proportion of TPS (%)
Antineovascularization agents [†]	Age-related macular degeneration, secondary and diabetic macular edema	387.1	7.6
Tumour necrosis factor alpha inhibitors (anti-TNF drugs)	Rheumatoid arthritis, inflammatory bowel disease, Crohn disease	219.8	4.3
HMG-CoA reductase inhibitors (statins)	High cholesterol	214.1	4.2
Adrenergics in combination with corticosteroids or other drugs, excluding anticholinergics	Asthma, emphysema, chronic bronchitis	178.4	3.5
Angiotensin-converting enzyme (ACE) inhibitors, excluding combinations	Congestive heart failure, high blood pressure	155.8	3.1
Direct factor Xa inhibitors	Venous thromboembolism, stroke prevention, deep vein thrombosis prevention	147.4	2.9
Proton pump inhibitors (PPIs)	Gastroesophageal reflux disease, peptic ulcer disease	143.2	2.8
Dipeptidyl peptidase 4 (DPP-4) inhibitors	Type 2 diabetes mellitus	118.7	2.3
Dihydropyridine calcium channel blockers	High blood pressure, angina	115.8	2.3
Oral protein kinase inhibitors	Various types of cancer	111.4	2.2
Combined top 10		1,791.7	35.3

Notes

* The 11 jurisdictions submitting claims data to NPDUIS as of July 2017 are Newfoundland and Labrador, Prince Edward Island, Nova Scotia, New Brunswick, Ontario, Manitoba, Saskatchewan, Alberta, British Columbia, Yukon and the First Nations and Inuit Health Branch.

† Spending on ranibizumab and aflibercept (which accounted for 99.9% of spending on antineovascularization agents) in Nova Scotia, Manitoba and British Columbia, and the majority of this spending in Alberta, is funded through special programs and is not included in NPDUIS.

TPS: Total program spending.

Source

Table 5Top 10 drug classes by public drug program spending on
non-seniors, selected jurisdictions,* 2016

Drug class	Common uses	TPS (\$ millions)	Proportion of TPS (%)
Tumour necrosis factor alpha inhibitors (anti-TNF drugs)	Rheumatoid arthritis, inflammatory bowel disease, Crohn disease	581.4	14.1
Other antivirals [†]	Hepatitis C, HIV	415.0	10.1
Other antipsychotics	Schizophrenia, bipolar disorder	183.2	4.5
Drugs used in opioid dependence	Drug addiction	146.7	3.6
Antivirals for treatment of HIV infections, combinations	HIV	120.2	2.9
Natural opium alkaloids	Management of moderate to severe pain	110.8	2.7
Selective immunosuppressants	Various forms of arthritis, organ transplant, atypical hemolytic uremic syndrome	107.1	2.6
Diazepines, oxazepines, thiazepines and oxepines	Schizophrenia, bipolar disorder	103.6	2.5
Other antidepressants	Depression, anxiety	96.9	2.4
Other antiepileptics	Epilepsy, neuropathic pain	82.0	2.0
Combined top 10		1,946.9	47.3

Notes

* The 11 jurisdictions submitting claims data to NPDUIS as of July 2017 are Newfoundland and Labrador, Prince Edward Island, Nova Scotia, New Brunswick, Ontario, Manitoba, Saskatchewan, Alberta, British Columbia, Yukon and the First Nations and Inuit Health Branch.

† Spending on other antivirals in Prince Edward Island is not included in NPDUIS.

TPS: Total program spending.

HIV: Human immunodeficiency virus.

Source

National Prescription Drug Utilization Information System, Canadian Institute for Health Information.

Anti-TNF drugs accounted for the highest proportion of public drug program spending for non-seniors (14.1%), followed by other antivirals (primarily hepatitis C drugs) and other antipsychotics (accounting for 10.1% and 4.5% of spending, respectively). Other antivirals ranked 11th among seniors, accounting for 2.2% of program spending.

Opioids and drugs used in opioid dependence

Opioids are a class of medication used mainly for pain management. While they have important therapeutic benefits when used appropriately, opioids also have abuse potential and can lead to severe harm or even death if not used properly.^{8, 9} Canada is one of the world's largest per capita consumers of opioids. The high level of dispensing not only costs health care systems in terms of drug expenditures, but it is also a public health and safety concern due to the potential harm associated with opioid use.⁸

Natural opium alkaloids, such as morphine and codeine, ranked ninth among the top drug classes in terms of public drug program spending in 2016. A total of \$185.9 million was spent on this class, which accounted for 2.0% of total program spending, and 74.3% of program spending on opioids. This class ranked sixth among non-seniors, with public spending at \$110.8 million or 2.7% of total program spending. It should be noted that these figures do not include spending by private insurers or out-of-pocket spending, which, combined, are likely higher for non-seniors than seniors.

Although spending on natural opium alkaloids ranked ninth, it decreased from \$217.9 million in 2011 to \$185.9 million in 2016. The decrease was primarily due to a reduction in oxycodone use between 2011 and 2016. Including all opioids, spending decreased from \$287.9 million in 2011 to \$250.3 million in 2016.

Drugs used in opioid dependence were ranked fourth among non-seniors in spending. It is important to note that these drugs are often used to treat dependence on illicit opioids, such as heroin, and can also be used to manage pain.^{10, 11} In 2016, \$146.7 million was spent on drugs used in opioid dependence among non-seniors, accounting for 97.8% of drug program spending in that class. The majority (81.2% in 2016) of spending in this class is for methadone (sold under the brand names Metadol and Methadose), although the proportion of spending on buprenorphine in combination with naloxone (Suboxone) increased from 1.3% in 2011 to 18.8% in 2016. This combination product has been found to have a lower risk of fatal overdose compared with methadone.^{12, 13}

Direct oral anticoagulants

Direct factor Xa inhibitors, a class of direct oral anticoagulants (DOACs), are used for the treatment of prevention of stroke and for venous thromboembolic events. These drugs, which include Xarelto (rivaroxaban) and Eliquis (apixaban), were first marketed in Canada in 2008. Although they are more expensive than warfarin (a vitamin K antagonist) — the most commonly used oral anticoagulant, which has been on the market for decades — they have a lower risk of some adverse events, have fewer known drug interactions and require less patient monitoring.¹⁴ Direct factor Xa inhibitors ranked fourth in terms of contribution to growth in public drug spending in 2016; spending on the class increased to \$156.6 million, up from \$2.8 million in 2011. In 2016, direct factor Xa inhibitors ranked sixth in drug program spending among seniors.

Differences in drug spending between females and males

Females accounted for 51.2% of total program spending and 55.0% of active beneficiaries in the 11 jurisdictions in 2016 (see Appendix H). 6 drug classes appeared in the top 10 drug classes for both females and males (tables 6 and 7).

Table 6Top 10 drug classes by public drug program spending on females,
selected jurisdictions,* 2016

Drug class	Common uses	TPS (\$ millions)	Proportion of TPS (%)	Rate of use (%)
Tumour necrosis factor alpha inhibitors (anti-TNF drugs)	Rheumatoid arthritis, inflammatory bowel disease, Crohn disease	416.9	8.9	0.5
Antineovascularization agents⁺Age-related macular degeneration, secondary and diabetic macular edema		235.8	5.0	0.5
Other antivirals [‡]	Hepatitis C, HIV	168.4	3.6	0.1
Adrenergics in combination with corticosteroids or other drugs, excluding anticholinergics	Asthma, emphysema, chronic bronchitis	129.8	2.8	4.7
HMG-CoA reductase inhibitors (statins)	High cholesterol	129.4	2.8	22.8
Proton pump inhibitors (PPIs)	Gastroesophageal reflux disease, peptic ulcer disease	119.9	2.5	19.8
Other antidepressants	Depression, anxiety	117.0	2.5	10.9
Natural opium alkaloidsManagement of moderate to severe pain		99.5	2.1	14.6
Selective immunosuppressants	Various forms of arthritis, organ transplant, atypical hemolytic uremic syndrome	98.5	2.1	0.4
Angiotensin-converting enzyme (ACE) inhibitors, excluding combinations	Congestive heart failure, high blood pressure	94.9	2.0	13.0
Combined top 10		1,610.1	34.2	n/a

Notes

* The 11 jurisdictions submitting claims data to NPDUIS as of July 2017 are Newfoundland and Labrador, Prince Edward Island, Nova Scotia, New Brunswick, Ontario, Manitoba, Saskatchewan, Alberta, British Columbia, Yukon and the First Nations and Inuit Health Branch.

† Spending on ranibizumab and aflibercept (which accounted for 99.9% of spending on antineovascularization agents) in Nova Scotia, Manitoba and British Columbia, and the majority of this spending in Alberta, is funded through special programs and is not included in NPDUIS.

‡ Spending on other antivirals in Prince Edward Island is not included in NPDUIS.

TPS: Total program spending.

Source

Table 7Top 10 drug classes by public drug program spending on males,
selected jurisdictions,* 2016

Drug class	Common uses	TPS (\$ millions)	Proportion of TPS (%)	Rate of use (%)
Tumour necrosis factor alpha inhibitors (anti-TNF drugs)	Rheumatoid arthritis, inflammatory bowel disease, Crohn disease	384.1	8.6	0.5
Other antivirals ⁺	Hepatitis C, HIV	355.9	7.9	0.2
Antineovascularization agents [‡]	eovascularization Age-related macular degeneration, secondary and diabetic macular edema		3.9	0.5
HMG-CoA reductase inhibitors (statins)	High cholesterol	131.2	2.9	31.7
Other antipsychotics	Schizophrenia, bipolar disorder	126.7	2.8	2.2
Adrenergics in combination with corticosteroids or other drugs, excluding anticholinergics	Asthma, emphysema, chronic bronchitis	103.9	2.3	4.4
Angiotensin-converting enzyme (ACE) inhibitors, excluding combinationsCongestive heart failure, high blood pressure		99.0	2.2	18.9
Antivirals for treatment of HIV infections, combinations	ivirals for treatment of HIV infections, combinations		2.2	0.2
Oral protein kinase inhibitors	Various types of cancer		2.0	0.1
Insulins and analogues for injection, long-acting	Type 1 or type 2 diabetes mellitus	86.8	1.9	2.7
Combined top 10		1,649.6	36.8	n/a

Notes

* The 11 jurisdictions submitting claims data to NPDUIS as of July 2017 are Newfoundland and Labrador, Prince Edward Island, Nova Scotia, New Brunswick, Ontario, Manitoba, Saskatchewan, Alberta, British Columbia, Yukon and the First Nations and Inuit Health Branch.

† Spending on other antivirals in Prince Edward Island is not included in NPDUIS.

‡ Spending on ranibizumab and aflibercept (which accounted for 99.9% of spending on antineovascularization agents) in Nova Scotia, Manitoba and British Columbia, and the majority of this spending in Alberta, is funded through special programs and is not included in NPDUIS.

TPS: Total program spending.

Source

Anti-TNF drugs accounted for the highest proportion of public drug program spending among males and females, while antineovascularization agents and other antivirals were also on the top 3 list for both. PPIs ranked 6th among women but 14th among men. Antivirals for HIV infections ranked 8th among men but 31st among women.

There were also differences among the usage rate of drugs that appeared in the top 10 lists for both males and females. Statins were used by 22.8% of females compared with 31.7% of males, and ACE inhibitors were used by 13.0% of females compared with 18.9% of males. In spite of the differences in utilization, both classes accounted for similar proportions of spending for both men and women. This suggests that for women, spending per beneficiary was higher for both of these drug classes than it was for men.

High-cost users of drugs

The majority of public drug spending in 2016 was for a relatively small number of individuals. Public drug programs paid \$2,500 or more toward drug costs for 13.9% of beneficiaries, accounting for 68.3% of public drug spending. Conversely, the programs paid less than \$500 toward drug costs for more than half (52.5%) of beneficiaries, accounting for only 5.6% of program spending (Table 8).

Table 8Percentage of paid beneficiaries and public drug
program spending, by program spending per paid
beneficiary, selected jurisdictions,* 2016

Program spending per paid beneficiary	Proportion of paid beneficiaries (%)	Proportion of TPS (%)
<\$500	52.5	5.6
\$500-\$1,499	24.0	14.0
\$1,500-\$2,499	9.6	12.2
\$2,500-\$4,999	8.5	19.0
\$5,000-\$9,999	3.2	13.9
\$10,000+	2.2	35.4

Notes

* The 11 jurisdictions submitting claims data to NPDUIS as of July 2017 are Newfoundland and Labrador, Prince Edward Island, Nova Scotia, New Brunswick, Ontario, Manitoba, Saskatchewan, Alberta, British Columbia, Yukon and the First Nations and Inuit Health Branch

TPS: Total program spending.

Source

The proportion of drug program spending on beneficiaries for whom the drug program paid \$10,000 or more in drug spending increased from 33.5 % in 2015 to 35.4% in 2016, while the proportion of beneficiaries they accounted for increased marginally, from 2.1% to 2.2%.⁶

The distribution of cost varied across jurisdictions (see Appendix D). The proportion of individuals for whom the drug program covered less than \$500 in drug costs ranged from 76.0% for Saskatchewan and 73.1% for P.E.I. to 34.4% for Yukon and 43.2% for New Brunswick. In contrast, the proportion of individuals for whom the drug program paid \$2,500 or more toward drug costs was significantly smaller, ranging from 17.7% for Yukon and 17.1% for Ontario to 4.9% for P.E.I. and 6.6% for Saskatchewan. Variation in spending across jurisdictions can be influenced by many factors, such as drug program design and formulary coverage (see Appendix H).

The proportion of spending on high-cost drugs also continues to rise. In 2016, 25.8% of public drug spending was on chemicals with an average annual cost of \$10,000 or more per beneficiary, representing 7.8% of the total number of chemicals that were paid for by the public drug programs (Figure 2). In 2015, chemicals with an average annual cost of at least \$10,000 accounted for 23.3% of program spending.

Figure 2 Proportion of public drug program spending on chemicals that cost on average \$10,000 or more per paid beneficiary, and the proportion of total chemicals paid, selected jurisdictions,* 2014 to 2016



Notes

* The 11 jurisdictions submitting claims data to NPDUIS as of July 2017 are Newfoundland and Labrador,

Prince Edward Island, Nova Scotia, New Brunswick, Ontario, Manitoba, Saskatchewan, Alberta, British Columbia, Yukon and the First Nations and Inuit Health Branch.

TPS: Total program spending.

Drug products without an ATC code assigned by Health Canada and products assigned as pseudo-drug identification numbers are excluded.

Source

10 chemicals accounted for two-thirds (66.2%) of this spending. Among chemicals costing more than \$10,000 per paid beneficiary, anti-TNFs and hepatitis C drugs accounted for 5 of the top 6 chemicals, with infliximab, an anti-TNF, accounting for the highest proportion (4.0%) of drug program spending. 5 of the top 10 chemicals were biologics.

Table 9Top 10 chemicals that cost on average \$10,000 or more
per paid beneficiary, by public drug program spending,
selected jurisdictions,* 2016

Chemical	Common uses	TPS (\$ millions)	Proportion of TPS (%)
Infliximab	Rheumatoid arthritis, Crohn disease	368.7	4.0
Sofosbuvir and ledipasvir	Hepatitis C	346.1	3.8
Adalimumab	Rheumatoid arthritis, Crohn disease	232.6	2.5
Etanercept	Rheumatoid arthritis, ankylosing spondylitis	146.8	1.6
Lenalidomide	Myelodysplastic syndromes	114.6	1.2
Sofosbuvir	Hepatitis C	113.1	1.2
Ustekinumab	Plaque psoriasis, Crohn disease, psoriatic arthritis	44.4	0.5
Dasabuvir, ombitasvir, paritaprevir and ritonavir	Hepatitis C	43.5	0.5
Golimumab	Rheumatoid arthritis, psoriatic arthritis, ulcerative colitis, ankylosing spondylitis	41.2	0.4
Octreotide	Carcinoid tumours, metastatic carcinoid and vasoactive intestinal peptide- secreting tumours	37.5	0.4
Combined top 10		1,488.7	16.2

Notes

* The 11 jurisdictions submitting claims data to NPDUIS as of July 2017 are Newfoundland and Labrador, Prince Edward Island, Nova Scotia, New Brunswick, Ontario, Manitoba, Saskatchewan, Alberta, British Columbia, Yukon and the First Nations and Inuit Health Branch.

TPS: Total program spending.

Source

Drug spending in hospitals

Public drug program spending does not include spending on drugs dispensed in hospitals or on those funded through cancer agencies and other special programs. Spending on these drugs can impact the distribution of spending across broad therapeutic categories, especially as it relates to antineoplastic and immunomodulating agents. In 2015, the most recent year for which hospital spending data was available, among all provinces except Quebec, an estimated \$2.1 billion was spent on drugs dispensed in hospitals. In provinces that report cancer drug spending in hospitals, roughly one-third (33.5%) of hospital drug spending was on cancer drugs (Table 10).

Province	Drug spending in hospital⁺ (\$ millions)	Drugs as a share of total hospital spending (%)	Cancer drug spending [‡] in hospitals (\$ millions)
N.L.	50.4	3.7	17.5
P.E.I.	9.3	3.3	3.7
N.S.	99.7	4.5	32.3
N.B.	73.1	4.8	33.4
Ont.	1201.4	5.3	391.8
Man.	81.1	2.9	n/a
Sask.	51.1	2.4	n/a
Alta.	228.5	2.9	75.2
B.C.	315.5	4.5	152.9
Total	2,113.5	4.4	707.6

Table 10Drug spending in hospital, by selected province,* 2015

Notes

* The 9 provinces are Newfoundland and Labrador, Prince Edward Island, Nova Scotia, New Brunswick, Ontario, Manitoba, Saskatchewan, Alberta and British Columbia.

† Includes only drug spending borne by hospitals. Spending on drugs used in hospitals but funded through other agencies, such as provincial cancer agencies, is excluded. As a result, Manitoba and Saskatchewan cancer drug spending data is not available.

[‡] Drugs classified as antineoplastics according to the MIS Standards are considered to be cancer drugs in this analysis. n/a: Not available.

Source

Canadian MIS Database, Canadian Institute for Health Information.

Conclusion

This report looks at public drug program spending in 2016 in all provinces (except Quebec), Yukon and 1 federal program administered by FNIHB. Spending in these 11 jurisdictions reached \$9.2 billion in 2016, representing roughly two-thirds of total public drug spending in Canada. Anti-TNF drugs accounted for the highest proportion of spending (8.7%) in 2016, followed by other antivirals (5.7%), which primarily include hepatitis C drugs.

In the 11 jurisdictions studied, 2016 spending on prescribed drugs increased by 4.5%, compared with 9.3% in 2015. The spike in growth in 2015 and subsequent decrease in 2016 was largely driven by spending on new hepatitis C drugs, which were introduced in 2014. Excluding these drugs, there has been fairly steady growth in spending since 2013, with rates of 3.2% (2013), 3.5% (2014), 3.6% (2015) and 4.2% (2016).

In spite of the slowed growth in spending on hepatitis C drugs, these drugs remained the second-highest contributor to growth, after anti-TNF drugs. Oral protein kinase inhibitors and direct Xa factor antagonists were the next highest contributors.

The proportion of spending on high-cost users continues to rise. The proportion of drug program spending on beneficiaries for whom the drug program paid \$10,000 or more toward drugs increased from 33.5 % in 2015 to 35.4% in 2016, while the proportion of corresponding beneficiaries increased from 2.1% to 2.2%.

Appendix A: Annual growth rate of active beneficiaries and public drug program spending, by selected jurisdiction,* 2012 to 2016

		Annual growth rate								
		Activ	e benefic	iaries		Total program spending				
Jurisdiction ⁺	2012	2013	2014	2015	2016	2012	2013	2014	2015	2016
N.L.	1.9	-1.7	-3.1	-0.3	-0.6	7.0	-6.7	-2.8	4.8	3.7
P.E.I.	3.3	2.8	4.7	11.3	13.2	-3.6	-5.8	-12.1	-1.9	15.3
N.S.	2.5	2.2	1.7	2.0	2.2	-2.2	0.0	0.1	4.2	3.2
N.B.	1.2	0.2	-0.1	0.3	5.2	-3.5	-6.4	-0.8	7.0	5.6
Ont.	3.5	3.0	2.9	2.0	2.7	2.9	7.2	5.1	8.3	5.0
Man.	2.0	0.2	2.6	1.6	1.0	-0.7	-4.2	0.3	9.0	5.4
Sask.	1.5	2.2	1.9	2.1	2.8	-4.1	1.3	6.4	5.1	2.7
Alta.	2.4	2.8	2.9	3.0	3.5	0.1	-2.5	1.8	10.0	0.8
B.C.	0.1	0.5	0.2	1.1	1.9	-0.7	-1.4	-0.6	15.9	3.1
Y.T.	3.0	1.6	3.9	4.3	5.1	3.0	-8.9	0.2	27.5	-6.4
FNIHB	3.6	1.3	1.8	1.7	1.9	3.4	0.5	6.0	12.3	9.0
Total	2.0	1.6	1.7	1.7	2.3	1.5	3.2	3.5	9.3	4.5

Notes

* The 11 jurisdictions submitting claims data to NPDUIS as of July 2017 are Newfoundland and Labrador, Prince Edward Island, Nova Scotia, New Brunswick, Ontario, Manitoba, Saskatchewan, Alberta, British Columbia, Yukon and the First Nations and Inuit Health Branch.

† Differences in jurisdictional growth rates should be interpreted with caution as they can be influenced by data limitations. For example, spending on hepatitis C drugs is not included in NPDUIS in all jurisdictions.

FNIHB: First Nations and Inuit Health Branch.

Source

Appendix B: Percentage of public drug program spending, by broad therapeutic category and selected jurisdiction,* 2016

Broad therapeutic					Public	drug pro	ogram s	pendin	g (%)			
category	N.L.	P.E.I.	N.S.	N.B.	Ont.	Sask.	Man.	Alta.	B.C.	Y.T.	FNIHB	Overall
Antineoplastic and immunomodulating agents	17.3	25.9	22.7	20.2	15.4	25.8	36.2	25.4	22.3	15.2	8.4	18.1
Nervous system	20.1	20.7	13.1	24.4	16.5	18.0	18.2	12.2	26.4	10.0	23.0	18.0
Cardiovascular system	16.1	14.6	18.8	14.1	12.4	12.0	8.4	15.9	9.7	8.8	9.7	12.3
Alimentary tract and metabolism	12.8	12.5	12.7	10.8	13.1	10.1	8.7	11.8	7.7	9.1	14.6	12.1
Antiinfectives for systemic use	6.5	1.4	4.7	6.9	9.1	8.3	10.4	6.4	14.9	14.6	13.7	9.7
Respiratory system	6.6	6.7	8.0	7.7	6.0	6.2	4.7	7.9	4.3	8.7	6.2	6.0
Sensory organs	3.0	3.3	2.2	4.5	8.4	2.5	0.7	2.8	0.9	1.5	1.5	5.8
Blood and blood- forming organs	2.5	2.0	3.6	4.4	5.0	4.2	3.2	6.1	3.6	2.0	3.0	4.6
Musculoskeletal system	2.2	1.0	2.3	2.0	3.2	1.6	1.4	3.2	1.7	1.6	2.4	2.8
Genitourinary system and sex hormones	1.9	1.5	1.7	1.9	2.0	1.5	1.4	2.5	1.1	1.1	2.6	1.9
Systemic hormonal preparations, excluding sex hormones and insulins	1.8	1.0	2.5	1.5	1.5	1.1	1.9	2.1	1.4	1.0	1.1	1.5
Dermatologicals	1.4	0.9	1.1	0.9	1.0	0.9	0.6	0.8	0.6	0.6	2.1	1.0
Various	0.2	0.1	0.2	0.3	1.1	0.5	0.2	0.4	0.5	0.2	0.6	0.8
Antiparasitic products, insecticides and repellents	0.2	0.1	0.1	0.1	0.1	0.2	0.1	0.2	0.1	0.1	0.7	0.2
Unassigned ⁺	0.3	0.0	0.0	0.0	1.9	0.9	1.1	0.6	0.1	15.1	1.8	1.4
Non-drug products	7.2	8.1	6.1	0.3	3.2	6.2	2.7	1.5	4.7	10.5	8.6	3.8

Notes

* The 11 jurisdictions submitting claims data to NPDUIS as of July 2017 are Newfoundland and Labrador, Prince Edward Island, Nova Scotia, New Brunswick, Ontario, Manitoba, Saskatchewan, Alberta, British Columbia, Yukon and the First Nations and Inuit Health Branch.

† This category includes products without an assigned Anatomical Therapeutic Chemical (ATC) code.

FNIHB: First Nations and Inuit Health Branch.

Source

Appendix C: Generic drugs as a percentage of public drug program spending and of accepted claims, by selected jurisdiction,* 2011, 2015 and 2016

			Generi	c drugs		
	20	11	20	15	20	16
Jurisdiction	Percentage of accepted TPS (%) claims (%)		Percentage of TPS (%)	Percentage of accepted claims (%)	Percentage of TPS (%)	Percentage of accepted claims (%)
N.L.	50.3	69.8	49.9	82.1	47.2	83.3
P.E.I.	44.7	66.3	45.6	78.7	43.1	80.0
N.S.	45.1	66.4	40.5	75.8	40.5	77.2
N.B.	44.2	69.0	38.2	77.8	39.6	82.7
Ont.	28.3	67.2	30.2	75.6	29.3	77.3
Man.	38.2	67.8	32.8	80.3	31.1	80.9
Sask.	35.3	61.1	29.6	73.1	28.5	75.9
Alta.	42.0	68.1	29.9	74.7	31.8	76.2
B.C.	43.0	68.3	32.6	74.7	32.6	77.8
Y.T.	39.0	69.3	27.9	79.8	32.4	80.7
FNIHB	50.4	70.4	44.6	77.4	43.6	78.2
Total	34.8	67.4	32.1	75.8	31.6	77.7

Notes

* The 11 jurisdictions submitting claims data to NPDUIS as of July 2017 are Newfoundland and Labrador, Prince Edward Island, Nova Scotia, New Brunswick, Ontario, Manitoba, Saskatchewan, Alberta, British Columbia, Yukon and the First Nations and Inuit Health Branch.

TPS: Total program spending.

FNIHB: First Nations and Inuit Health Branch.

Source

Appendix D: Percentage of paid beneficiaries and of public drug program spending, by program spending per paid beneficiary and selected jurisdiction,* 2011 and 2016

			Program spending per paid beneficiary										
		<\$!	500	\$ 500 –	\$1,499	\$1,5 \$2,	500– 499	\$2,5 \$4,	500- 999	\$5,0 \$9,)00– 999	\$10,	000+
Jurisdic	ction	2011	2016	2011	2016	2011	2016	2011	2016	2011	2016	2011	2016
N.L.	PB (%)	45.1	45.5	28.4	31.2	12.6	10.4	10.0	8.5	2.9	2.8	0.9	1.5
	TPS (%)	5.9	6.3	20.3	19.6	18.7	14.1	26.1	20.5	14.5	13.1	14.5	26.4
P.E.I.	PB (%)	48.9	73.1	33.5	17.6	9.7	4.3	5.3	3.1	1.7	1.0	0.9	0.8
	TPS (%)	8.7	14.7	28.7	21.9	17.5	12.1	17.0	15.5	10.8	10.2	17.3	25.5
N.S.	PB (%)	32.8	44.2	35.6	33.3	14.9	10.2	12.7	8.5	3.1	2.3	0.9	1.5
	TPS (%)	5.0	7.3	21.6	20.2	19.2	13.9	28.8	20.3	13.1	10.3	12.3	28.0
N.B.	PB (%)	35.8	43.2	29.7	31.0	14.8	11.1	13.2	8.8	4.5	3.4	1.9	2.4
	TPS (%)	3.6	5.3	16.0	16.5	16.3	12.9	26.0	18.2	17.0	14.0	21.0	33.1
Ont.	PB (%)	40.8	45.3	29.4	25.9	13.1	11.6	11.3	10.6	3.9	4.0	1.6	2.5
	TPS (%)	4.4	4.3	17.5	13.2	16.2	12.6	24.8	20.4	16.4	15.2	20.7	34.3
Man.	PB (%)	42.9	48.1	26.8	24.8	12.1	9.7	11.2	8.8	4.3	4.2	2.8	4.4
	TPS (%)	4.1	3.6	13.1	9.4	12.5	7.9	20.6	13.0	15.4	12.1	34.3	53.9
Sask.	PB (%)	62.9	76.0	21.1	12.6	7.9	4.9	5.5	3.9	1.5	1.4	1.0	1.3
	TPS (%)	7.5	7.8	21.6	14.2	17.2	11.9	21.0	16.8	11.3	11.6	21.4	37.7
Alta.	PB (%)	36.6	50.0	36.6	30.5	14.4	9.8	8.9	6.3	2.0	1.6	1.6	1.9
	TPS (%)	5.4	8.0	24.1	19.9	19.7	14.1	21.0	15.7	9.5	8.1	20.3	34.3
B.C.	PB (%)	54.7	60.4	24.4	20.0	8.7	7.2	7.8	7.0	2.9	2.9	1.5	2.6
	TPS (%)	7.6	6.8	18.0	11.6	13.9	9.2	22.3	15.9	16.2	13.1	22.1	43.3
Y.T.	PB (%)	28.2	34.4	31.7	34.9	15.8	13.0	14.3	10.0	6.4	4.5	3.6	3.2
	TPS (%)	2.7	3.4	12.3	14.3	12.6	10.9	20.4	15.1	18.5	13.7	33.5	42.6

		Program spending per paid beneficiary											
		<\$500		\$500-\$1,499		\$1,500– \$2,499		\$2,500– \$4,999		\$5,000– \$9,999		\$10,000+	
Jurisdiction		2011	2016	2011	2016	2011	2016	2011	2016	2011	2016	2011	2016
FNIHB	PB (%)	71.4	69.4	15.4	16.4	5.8	5.7	5.0	5.5	1.7	2.0	0.6	1.0
	TPS (%)	12.9	11.0	18.3	15.9	15.2	12.3	23.1	20.8	15.6	14.7	14.8	25.3
Total	PB (%)	47.0	52.5	27.4	24.0	11.5	9.6	9.5	8.5	3.2	3.2	1.5	2.2
	TPS (%)	5.6	5.6	18.4	14.0	16.2	12.1	23.8	19.0	15.3	13.9	20.8	35.4

Notes

* The 11 jurisdictions submitting claims data to NPDUIS as of July 2017 are Newfoundland and Labrador, Prince Edward Island, Nova Scotia, New Brunswick, Ontario, Manitoba, Saskatchewan, Alberta, British Columbia, Yukon and the First Nations and Inuit Health Branch.

PB: Paid beneficiaries.

TPS: Total program spending.

FNIHB: First Nations and Inuit Health Branch.

Source

Appendix E: Proportion of public drug program spending per paid beneficiary per chemical, selected jurisdictions,* 2014, 2015 and 2016

Program	2	014	2	015	2016		
spending per paid beneficiary per chemical	Proportion of TPS (%)	Proportion of number of chemicals (%)	Proportion of TPS (%)	Proportion of number of chemicals (%)	Proportion of TPS (%)	Proportion of number of chemicals (%)	
<\$500	48.3	70.6	44.4	69.8	42.8	68.8	
\$500-\$1,499	20.2	12.5	18.2	12.9	17.4	12.3	
\$1,500-\$4,999	5.7	6.9	6.4	6.6	6.9	7.7	
\$5,000-\$9,999	8.9	3.4	7.7	3.0	7.2	3.4	
\$10,000+	16.9	6.5	23.3	7.7	25.8	7.8	

Notes

* The 11 jurisdictions submitting claims data to NPDUIS as of July 2017 are Newfoundland and Labrador, Nova Scotia, New Brunswick, Prince Edward Island, Ontario, Manitoba, Saskatchewan, Alberta, British Columbia, Yukon and the First Nations and Inuit Health Branch.

TPS: Total program spending.

Source

Appendix F: Top 10 drug classes with the highest proportion of public drug program spending, by jurisdiction, 2016

Newfoundland and Labrador

Top 10 drug classes	TPS (\$ thousands)	Proportion of TPS (%)	Rate of use (%)	N.L.
Tumour necrosis factor alpha inhibitors (anti-TNF drugs)	11,084.5	7.5	0.7	
HMG-CoA reductase inhibitors (statins)	5,310.9	3.6	37.3	
Other antivirals	4,486.8	3.1	0.1	
Drugs used in opioid dependence	4,425.6	3.0	1.4	
Proton pump inhibitors (PPIs)	4,323.7	2.9	34.5	
Other immunosuppressants	4,177.8	2.8	0.4	
Angiotensin-converting enzyme (ACE) inhibitors, excluding combinations	3,977.4	2.7	22.3	
Dihydropyridine derivatives	3,682.0	2.5	13.4	
Selective serotonin reuptake inhibitors	3,164.5	2.2	15.6	
Oral protein kinase inhibitors	2,884.8	2.0	0.1	

Note

TPS: Total program spending.

Source

Prince Edward Island

P.E.I.	Top 10 drug classes	TPS (\$ thousands)	Proportion of TPS (%)	Rate of use (%)
	Tumour necrosis factor alpha inhibitors (anti-TNF drugs)	3,763.1	13.1	0.8
	Drugs used in opioid dependence	1,237.6	4.3	1.8
	Proton pump inhibitors (PPIs)	1,222.7	4.3	25.5
	Other immunosuppressants	1,076.0	3.8	0.4
	HMG-CoA reductase inhibitors (statins)	1,007.6	3.5	30.8
	Angiotensin-converting enzyme (ACE) inhibitors, excluding combinations	678.2	2.4	17.2
	Diazepines, oxazepines, thiazepines and oxepines	654.7	2.3	2.6
	Dihydropyridine derivatives	546.1	1.9	13.4
	Other antipsychotics	545.2	1.9	1.7
	Selective serotonin reuptake inhibitors	543.7	1.9	13.2

Note

TPS: Total program spending.

Source

National Prescription Drug Utilization Information System, Canadian Institute for Health Information.

Nova Scotia

N.S.	Top 10 drug classes	TPS (\$ thousands)	Proportion of TPS (%)	Rate of use (%)
	Tumour necrosis factor alpha inhibitors (anti-TNF drugs)	23,108.2	11.8	0.9
	HMG-CoA reductase inhibitors (statins)	8,218.1	4.2	44.1
	Proton pump inhibitors (PPIs)	6,689.0	3.4	35.4
	Other antivirals	5,953.1	3.0	0.1
	Other immunosuppressants	5,838.2	3.0	0.4
	Angiotensin-converting enzyme (ACE) inhibitors, excluding combinations	5,613.0	2.9	22.4
	Adrenergics in combination with corticosteroids or other drugs, excluding anticholinergics	5,115.2	2.6	4.3
	Dihydropyridine derivatives	4,650.9	2.4	18.2
	Oral protein kinase inhibitors	4,236.9	2.2	0.1
	Natural opium alkaloids	3,900.0	2.0	12.8

Note

TPS: Total program spending.

Source

New Brunswick

Top 10 drug classes	TPS (\$ thousands)	Proportion of TPS (%)	Rate of use (%)	N.B.
Tumour necrosis factor alpha inhibitors (anti-TNF drugs)	15,153.8	7.3	0.8	
Antineovascularization agents	7,006.8	3.4	0.6	
Oral protein kinase inhibitors	6,458.7	3.1	0.2	
Drugs used in opioid dependence	6,361.8	3.0	2.0	
Adrenergics in combination with corticosteroids or other drugs, excluding anticholinergics	6,065.7	2.9	5.8	
HMG-CoA reductase inhibitors (statins)	6,025.6	2.9	38.3	
Diazepines, oxazepines, thiazepines and oxepines	5,800.6	2.8	9.2	
Other antipsychotics	5,781.8	2.8	4.9	
Other antivirals	5,669.6	2.7	0.1	
Proton pump inhibitors (PPIs)	5,645.3	2.7	37.4	

Note

TPS: Total program spending.

Source

National Prescription Drug Utilization Information System, Canadian Institute for Health Information.

Ontario

Top 10 drug classes	TPS (\$ thousands)	Proportion of TPS (%)	Rate of use (%)	Ont.
Antineovascularization agents	382,169.5	7.0	1.3	
Other antivirals	268,039.9	4.9	0.2	
Tumour necrosis factor alpha inhibitors (anti-TNF drugs)	264,354.2	4.8	0.5	
HMG-CoA reductase inhibitors (statins)	164,244.2	3.0	41.3	
Adrenergics in combination with corticosteroids or other drugs, excluding anticholinergics	147,453.4	2.7	7.8	-
Other antipsychotics	132,717.9	2.4	3.1	
Oral protein kinase inhibitors	127,814.7	2.3	0.1	
Dipeptidyl peptidase 4 (DPP-4) inhibitors	122,007.5	2.2	4.4	
Direct factor Xa inhibitors	117,784.7	2.2	4.8	
Angiotensin-converting enzyme (ACE) inhibitors, excluding combinations	117,779.2	2.2	21.2	-

Note

TPS: Total program spending.

Source

Manitoba

Man.	Top 10 drug classes	TPS (\$ thousands)	Proportion of TPS (%)	Rate of use (%)
	Tumour necrosis factor alpha inhibitors (anti-TNF drugs)	71,032.5	20.5	0.3
	Other antivirals	19,588.6	5.7	0.0
	Oral protein kinase inhibitors	13,641.5	3.9	0.1
	Other immunosuppressants	10,509.1	3.0	0.3
	Natural opium alkaloids	8,500.4	2.5	13.8
	Adrenergics in combination with corticosteroids or other drugs, excluding anticholinergics	7,605.5	2.2	4.0
	Other antipsychotics	7,052.5	2.0	1.3
	Diazepines, oxazepines, thiazepines and oxepines	7,024.4	2.0	2.3
	Antivirals for treatment of HIV infections, combinations	6,734.5	1.9	0.1
	Selective immunosuppressants	6,034.3	1.7	0.2

Notes

TPS: Total program spending.

HIV: Human immunodeficiency virus.

Source

National Prescription Drug Utilization Information System, Canadian Institute for Health Information.

Saskatchewan

Sask.	Top 10 drug classes	TPS (\$ thousands)	Proportion of TPS (%)	Rate of use (%)
	Tumour necrosis factor alpha inhibitors (anti-TNF drugs)	62,045.4	19.1	0.4
	Other antivirals	12,923.1	4.0	0.1
	Natural opium alkaloids	8,575.2	2.6	11.0
	Adrenergics in combination with corticosteroids or other drugs, excluding anticholinergics	7,176.6	2.2	1.8
	Insulins and analogues for injection, long-acting	7,117.9	2.2	2.0
	Other antipsychotics	6,789.8	2.1	1.3
	HMG-CoA reductase inhibitors (statins)	6,757.8	2.1	15.8
	Proton pump inhibitors (PPIs)	6,734.1	2.1	15.1
	Selective immunosuppressants	6,362.6	2.0	0.2
	Diazepines, oxazepines, thiazepines and oxepines	6,165.1	1.9	2.4

Note

TPS: Total program spending.

Source

Alberta

Top 10 drug classes	TPS (\$ thousands)	Proportion of TPS (%)	Rate of use (%)	Alta.
Tumour necrosis factor alpha inhibitors (anti-TNF drugs)	134,530.5	17.4	1.2	
Adrenergics in combination with corticosteroids or other drugs, excluding anticholinergics	31,434.3	4.1	9.6	
Other antivirals	29,758.8	3.8	0.1	_
HMG-CoA reductase inhibitors (statins)	27,399.4	3.5	39.7	
Selective immunosuppressants	22,446.8	2.9	0.4	
Proton pump inhibitors (PPIs)	22,438.2	2.9	30.8	_
Angiotensin-converting enzyme (ACE) inhibitors, excluding combinations	21,403.6	2.8	22.2	
Insulins and analogues for injection, long-acting	17,611.1	2.3	3.8	
Natural opium alkaloids	17,451.8	2.3	15.5	-
Direct factor Xa inhibitors	15,885.5	2.1	3.7	

Note

TPS: Total program spending.

Source

National Prescription Drug Utilization Information System, Canadian Institute for Health Information.

British Columbia

Top 10 drug classes	TPS (\$ thousands)	Proportion of TPS (%)	Rate of use (%)	B.C.
Tumour necrosis factor alpha inhibitors (anti-TNF drugs)	188,760.6	16.8	0.4	
Other antivirals	139,332.7	12.4	0.1	
Other antipsychotics	45,110.7	4.0	1.2	
Diazepines, oxazepines, thiazepines and oxepines	39,046.2	3.5	3.2	
Drugs used in opioid dependence	31,521.1	2.8	0.8	
HMG-CoA reductase inhibitors (statins)	24,191.9	2.2	15.7	
Selective immunosuppressants	23,995.5	2.1	0.1	
Natural opium alkaloids	23,961.7	2.1	14.3	
Selective serotonin reuptake inhibitors	21,884.3	1.9	10.0	
Other antidepressants	20,398.3	1.8	7.0	

Note

TPS: Total program spending.

Source

Yukon

Top 10 drug classes	TPS (\$ thousands)	Proportion of TPS (%)	Rate of use (%)
Other antivirals	1,307.4	11.2	0.4
Tumour necrosis factor alpha inhibitors (anti-TNF drugs)	765.4	6.6	1.2
Other respiratory system products	280.9	2.4	0.0
Enzymes	276.9	2.4	0.0
HMG-CoA reductase inhibitors (statins)	261.7	2.2	30.6
Oral protein kinase inhibitors	253.4	2.2	0.2
Adrenergics in combination with corticosteroids or other drugs, excluding anticholinergics	229.8	2.0	4.8
Antivirals for treatment of HIV infections, combinations	218.6	1.9	0.4
Angiotensin-converting enzyme (ACE) inhibitors, excluding combinations	212.6	1.8	27.4
Selective immunosuppressants	191.1	1.6	0.8

Notes

TPS: Total program spending.

HIV: Human immunodeficiency virus.

Source

National Prescription Drug Utilization Information System, Canadian Institute for Health Information.

First Nations and Inuit Health Branch

FNIHB	Top 10 drug classes	TPS (\$ thousands)	Proportion of TPS (%)	Rate of use (%)
	Other antivirals	37,546.4	6.6	0.2
	Tumour necrosis factor alpha inhibitors (anti-TNF drugs)	26,771.8	4.7	0.3
	Drugs used in opioid dependence	24,718.3	4.3	2.0
	Natural opium alkaloids	16,224.0	2.8	19.8
	Proton pump inhibitors (PPIs)	13,897.5	2.4	16.4
	Other antiepileptics	12,893.7	2.3	5.8
	Other antipsychotics	12,785.3	2.2	1.4
	Insulins and analogues for injection, long-acting	12,719.3	2.2	2.9
	Antivirals for treatment of HIV infections, combinations	12,406.2	2.2	0.3
	Angiotensin-converting enzyme (ACE) inhibitors, excluding combinations	12,339.2	2.2	10.3

Notes

TPS: Total program spending.

HIV: Human immunodeficiency virus.

Source

Appendix G: Annual growth rate of public drug program spending for top 10 drug classes (in total program spending), selected jurisdictions,* 2012 to 2016

	Annual growth rate of public drug program spending (%)				
Top 10 drug classes (in TPS)	2012	2013	2014	2015	2016
Tumour necrosis factor alpha inhibitors (anti-TNF drugs)	19.5	17.6	12.9	9.6	11.5
Other antivirals ⁺	36.7	23.0	16.4	2,561.6	10.6
Antineovascularization agents ^{‡, §}	13.4	42.7	16.4	10.2	-4.9
HMG-CoA reductase inhibitors (statins)	-20.9	-31.0	-11.2	-1.9	1.0
Adrenergics in combination with corticosteroids or other drugs, excluding anticholinergics	5.6	6.0	3.3	2.9	1.0
Other antipsychotics	36.9	22.6	16.7	13.2	18.1
Proton pump inhibitors (PPIs)	1.3	-8.7	-1.3	2.6	-21.8
Angiotensin-converting enzyme (ACE) inhibitors, excluding combinations	-2.5	-8.7	-0.7	1.2	1.0
Natural opium alkaloids	-6.3	-11.4	0.5	1.8	0.5
Other antidepressants	11.5	4.0	9.3	9.7	-12.8
All drug classes	1.5	3.2	3.5	9.3	4.5

Notes

* The 11 jurisdictions submitting claims data to NPDUIS as of July 2017 are Newfoundland and Labrador, Prince Edward Island, Nova Scotia, New Brunswick, Ontario, Manitoba, Saskatchewan, Alberta, British Columbia, Yukon and the First Nations and Inuit Health Branch.

† Spending on other antivirals in Prince Edward Island is not included in NPDUIS.

‡ Spending on ranibizumab and aflibercept (which accounted for 99.9% of spending on antineovascularization agents) in Nova Scotia, Manitoba and British Columbia, and the majority of this spending in Alberta, is funded through special programs and is not included in NPDUIS.

§ Due to a change in the funding of ranibizumab and aflibercept (which accounted for 99.9% of spending on antineovascularization agents) in Alberta in 2016, growth in antineovascularization agent spending was underestimated. Excluding Alberta from the calculation, spending increased by 7.9% in 2016.

TPS: Total program spending.

Source

Appendix H: Overview of drug program design and formulary

Overview of drug plan design

Although public drug coverage is available in the 11 jurisdictions included in this analysis, the design of public drug programs varies widely across jurisdictions. One major difference is that drug programs in Manitoba and B.C., as well as FNIHB's drug program, offer similar coverage to people of all ages, while the other jurisdictions have a separate plan designed specifically for seniors.

There is less consistency in the coverage of non-seniors across jurisdictions. In Manitoba, Saskatchewan and B.C., drug costs are reimbursed if they exceed a certain percentage of an individual's income. In most other jurisdictions, similar plans are available but only to those without private insurance. In all jurisdictions, coverage is available to individuals receiving income assistance. Coverage is also available for selected drugs to treat particular conditions in all provinces, though the drugs and conditions vary.

The differences in coverage of non-seniors across jurisdictions, along with population demographics, greatly impact the age distribution of the active beneficiary population, and in turn how drug program spending is distributed across age groups. In jurisdictions offering similar coverage to both non-seniors and seniors, non-seniors account for the vast majority of active beneficiaries, and the majority, albeit a lower proportion, of total drug program spending (Table 11). In these jurisdictions, the proportion of non-senior beneficiaries ranges from 74.1% in B.C. to 91.3% for FNIHB beneficiaries, where the large proportion is due to both plan design and the relatively lower average age of the population it covers. Non-seniors accounted for a proportion of drug program spending ranging from 64.4% in B.C. to 81.9% for FNIHB.

		Age group						
Jurisdiction	Sex	19 and younger	20–44	45–64	65–74	75–84	85+	Total
N.L.	Female	1.2	9.3	16.6	13.2	9.9	4.9	55.1
N.L.	Male	1.2	8.0	14.0	11.6	7.9	2.2	44.9
P.E.I.	Female	0.8	8.3	14.2	13.4	10.3	6.1	53.1
P.E.I.	Male	1.0	8.7	11.7	13.6	8.6	3.3	46.9
N.S. [†]	Female	0.5	3.3	6.7	20.8	14.5	8.0	53.8
N.S. [†]	Male	0.5	2.9	6.9	19.7	12.4	3.8	46.2
N.B.	Female	0.8	7.9	12.8	13.2	10.3	6.8	51.8
N.B.	Male	1.1	8.4	13.6	12.9	9.2	3.0	48.2
Ont.	Female	0.8	5.5	10.9	14.2	11.5	7.5	50.4
Ont.	Male	1.1	6.0	12.6	15.3	10.4	4.2	49.6
Man.	Female	1.5	11.2	19.4	8.7	6.6	4.1	51.5
Man.	Male	2.1	11.1	19.5	9.1	4.7	2.0	48.5
Sask.	Female	2.4	9.7	16.1	10.2	7.9	5.3	51.6
Sask.	Male	3.3	9.5	16.4	9.9	6.6	2.7	48.4
Alta. ⁺	Female	0.3	5.4	12.5	17.6	11.3	6.2	53.3
Alta. ⁺	Male	0.5	6.0	9.6	17.0	10.0	3.6	46.7
B.C.	Female	1.3	10.3	18.7	8.4	6.9	4.6	50.2
B.C.	Male	1.6	11.2	21.3	8.3	5.1	2.3	49.8
Ү.Т.	Female	4.1	3.5	12.7	15.1	7.2	2.4	45.0
Ү.Т.	Male	1.0	5.5	20.0	18.8	7.0	2.7	55.0
FNIHB	Female	4.0	18.4	23.9	6.8	3.1	0.8	57.0
FNIHB	Male	3.9	12.8	18.9	4.9	2.1	0.4	43.0
Total	Female	1.1	7.3	13.3	13.1	10.1	6.3	51.2
Total	Male	1.4	7.4	14.2	13.5	8.8	3.5	48.8

Table 11Public drug program spending, by sex, age group and
selected jurisdiction,* 2016

Notes

* The 11 jurisdictions submitting claims data to NPDUIS as of July 2017 are Newfoundland and Labrador, Prince Edward Island, Nova Scotia, New Brunswick, Ontario, Manitoba, Saskatchewan, Alberta, British Columbia, Yukon and the First Nations and Inuit Health Branch.

† Claims data for Community Services drug programs in Nova Scotia and Alberta is not submitted to NPDUIS, so beneficiaries younger than 65 are underrepresented in those provinces.

Sources

National Prescription Drug Utilization Information System, Canadian Institute for Health Information. Population data comes from Statistics Canada, Estimates of population. Interim population estimates were used for 2015.

		Age group						
Jurisdiction	Sex	19 and younger	20–44	45–64	65–74	75–84	85+	Total
N.L.	Female	5.4	11.7	11.9	14.1	9.8	5.1	58.0
N.L.	Male	5.3	6.7	9.3	11.1	7.4	2.2	42.0
P.E.I.	Female	2.8	7.6	10.2	18.0	10.2	5.1	53.9
P.E.I.	Male	2.8	5.2	10.2	16.9	8.4	2.6	46.1
N.S. [†]	Female	1.2	3.0	6.4	23.7	14.7	8.7	57.7
N.S. [†]	Male	1.1	1.7	4.7	19.9	11.4	3.5	42.3
N.B.	Female	3.8	7.6	8.8	16.5	11.9	7.8	56.4
N.B.	Male	3.7	5.4	8.2	13.9	9.2	3.2	43.6
Ont.	Female	2.9	5.9	8.0	19.7	11.7	6.3	54.5
Ont.	Male	3.0	4.5	7.4	17.7	9.5	3.4	45.5
Man.	Female	8.7	18.0	15.8	6.2	3.7	2.4	54.8
Man.	Male	8.8	12.5	14.0	5.7	3.0	1.2	45.2
Sask.	Female	9.6	17.6	14.7	5.7	3.8	2.6	54.0
Sask.	Male	9.5	12.8	13.7	5.5	3.1	1.4	46.0
Alta. [†]	Female	0.8	1.8	10.0	23.5	13.3	6.7	56.1
Alta. [†]	Male	0.8	1.3	4.7	21.7	11.3	4.1	43.9
B.C.	Female	6.6	17.5	17.1	7.3	4.2	2.4	55.1
B.C.	Male	6.5	11.8	14.6	6.8	3.8	1.4	44.9
Y.T.	Female	1.5	2.7	11.2	21.8	7.3	2.6	47.1
Ү.Т.	Male	1.8	2.8	10.4	26.4	9.1	2.4	52.9
FNIHB	Female	14.3	23.0	14.0	3.3	1.4	0.4	56.4
FNIHB	Male	12.9	16.0	11.1	2.5	0.9	0.2	43.6
Total	Female	5.8	12.5	12.7	12.5	7.4	4.1	55.0
Total	Male	5.7	8.8	10.9	11.3	6.1	2.2	45.0

Table 12 Active beneficiaries, by sex, age group and selected jurisdiction,* 2016

Notes

* The 11 jurisdictions submitting claims data to NPDUIS as of July 2017 are Newfoundland and Labrador, Prince Edward Island, Nova Scotia, New Brunswick, Ontario, Manitoba, Saskatchewan, Alberta, British Columbia, Yukon and the First Nations and Inuit Health Branch.

† Claims data for Community Services drug programs in Nova Scotia and Alberta is not submitted to NPDUIS, so beneficiaries younger than 65 are underrepresented in those provinces.

Sources

National Prescription Drug Utilization Information System, Canadian Institute for Health Information. Population data comes from Statistics Canada, Estimates of population. Interim population estimates were used for 2015.

In Saskatchewan, the proportion of non-senior beneficiaries (77.9%) is similar to the proportion in Manitoba and B.C.; however, the proportion of total program spending for non-seniors (57.4%) is slightly lower due to differences in cost sharing.

Among the remaining provinces, seniors accounted for the majority of both active beneficiaries and total program spending. The seniors' proportion of beneficiaries ranged from 49.7% in Newfoundland and Labrador to 81.9% in Nova Scotia, and the proportion of program spending for seniors ranged from 49.7% in Newfoundland and Labrador to 79.2% in Nova Scotia. It should be noted that drug claims from drug programs for income assistance recipients in Nova Scotia and Alberta are not submitted to NPDUIS. This results in a lower proportion of non-seniors appearing in the data for these provinces, as these programs provide coverage to non-seniors only.

Another important difference between drug programs is the cost-sharing mechanism employed, such as a deductible or copayment (or a combination of the 2), which will affect the amount that individuals and drug programs pay for each drug claim. For example, even for consistently covered populations like seniors, cost-sharing mechanisms vary. In Nova Scotia and New Brunswick, some seniors must pay premiums to enrol in the program, and then there are copayments for each claim. Newfoundland and Labrador, P.E.I., Ontario and Alberta also have copayments for each claim but do not charge premiums. In Manitoba, deductibles are used whereby seniors pay for their drug costs up to a certain percentage of their income and the drug program pays for their drug costs once the deductible has been reached. In Saskatchewan, some seniors have copayments, while others have deductibles, depending on income level; in B.C., deductibles are used, but there are also copayments for each claim once the deductible has been reached. FNIHB covers all eligible costs for those enrolled in its drug program, regardless of age or income.

Common to all provinces included in the analysis, individuals covered by provincial workers' compensation boards or federal drug programs are not eligible for coverage under provincial drug programs. Federal drug programs include those delivered by

- Correctional Service of Canada;
- First Nations and Inuit Health Branch;" and
- Veterans Affairs Canada.

In addition to the overview presented here, further information about public drug programs in Canada can be found in the *NPDUIS Plan Information Document*,¹⁵ available at <u>www.cihi.ca</u>, or on the websites of the public drug programs (see the Methodological Notes).

ii. This excludes seniors living in Ontario who also have coverage through FNIHB. These seniors first have their drug claims covered by the Ontario Drug Benefit program; any remaining drug costs are covered by FNIHB.

Formulary overview

Variation in the number and types of drugs covered by jurisdictional formularies is one of many factors that can lead to differences in drug utilization and expenditure. Other factors include the health, age and sex of the population, prescribing trends and the availability of non-drug therapies.

In 2016, drug classes common in all 11 public drug programs made up 91.9% of drug claims and 71.8% of drug program spending on seniors. For drug classes covered in at least 10 jurisdictions, the rates increased to 93.0% of drug claims and 79.1% of total program payments on seniors.^{III} Because such a large portion of program expenditures relates to drug classes that are listed in most jurisdictions, differences in formulary coverage are not expected to play a large role in any jurisdictional differences in overall utilization and expenditure. However, differences in formulary coverage may have a significant impact on the utilization of specific drugs or drug classes across jurisdictions. Given this potential impact, it is important to consider differences in formulary listings when comparing jurisdictional drug utilization or expenditure for specific drugs or drug classes.

iii. Drug products without an ATC code assigned by Health Canada and products assigned as pseudo-drug identification numbers are excluded.

Appendix I: Text alternatives for images

Text alternative data tables for Figure 1: Percentage share of public drug program spending and of accepted claims, by type of drug, selected jurisdictions,* 2016

Type of drug	Percentage of total program spending
Generic	31.6%
Brand name and biologic	68.4%

Type of drug	Percentage of claims
Generic	77.7%
Brand name and biologic	22.3%

Note

* The 11 jurisdictions submitting claims data to NPDUIS as of July 2017 are Newfoundland and Labrador, Prince Edward Island, Nova Scotia, New Brunswick, Ontario, Manitoba, Saskatchewan, Alberta, British Columbia, Yukon and the First Nations and Inuit Health Branch.

Source

National Prescription Drug Utilization Information System, Canadian Institute for Health Information.

Text alternative data table for Figure 2: Proportion of public drug program spending on chemicals that cost on average \$10,000 or more per paid beneficiary, and the proportion of total chemicals paid, selected jurisdictions,* 2014 to 2016

Proportion of	2014	2015	2016
Total program spending on chemicals that cost on average \$10,000 or more per paid beneficiary	16.9%	23.3%	25.8%
Chemicals paid that cost on average \$10,000 or more per paid beneficiary	6.5%	7.7%	7.8%

Notes

* The 11 jurisdictions submitting claims data to NPDUIS as of July 2017 are Newfoundland and Labrador, Prince Edward Island, Nova Scotia, New Brunswick, Ontario, Manitoba, Saskatchewan, Alberta, British Columbia, Yukon and the First Nations and Inuit Health Branch.

Drug products without an ATC code assigned by Health Canada and products assigned as pseudo-drug identification numbers are excluded.

Source

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