

Perspectives | January 2020

The Drug Pipeline: Whatever happened to?

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Introduction

In the past five years, a number of drugs that represent significant advances in treatment for cancer, cholesterol, migraine, hepatitis C and weight management have entered the Canadian market. Most of the new drugs come at a much higher cost relative to pre-existing treatments. In this report, TELUS Health takes a close look at their impact on private drug plans so far.

Claims data presented are pulled from TELUS Health's database of more than 12 million privately insured individuals. The year-end date for all reported years is September 30.

Double-digit growth in cancer category.

Total eligible costs for cancer drugs reached \$266.8 million in 2019—more than double the \$129.3 million reported for 2015. The past five years have seen double-digit growth year after year, and the current pipeline indicates that this trend will continue, and perhaps accelerate, in the foreseeable future.

““ The cancer drug category continues to grow with new products and indications for existing products receiving approval every month. This category is also experiencing an evolution, with these targeted therapies being used in a multitude of different tumour types and even receiving approval for tumour-agnostic indications, ”” noted Vicky Lee, clinical pharmacist at TELUS Health.

In 2015, the total eligible cost per claimant per treatment was \$1,444. Newer, targeted therapies have steadily added to this average cost per treatment, with double-digit growth rates starting in 2017. In 2019, the average eligible cost per claimant per treatment reached \$2,252.

Tagrisso is a good example of one of these new targeted therapies. It is a first-line treatment that targets the tumours of metastatic non-small lung cancer, which test positive for one of two genetic mutations. Studies show that it increases the survival rate by an average of 8.7 months. “That is a pretty good result, providing quality time for patients and their families,” said Mark Jackson, consultant pharmacist for TELUS Health.

There were 29 claimants for Tagrisso after its first full year of claims (year ending September 30, 2017). Year two saw 76 claimants; year three, 114. The average eligible cost per claimant per treatment period (which ends when the cancer advances, or death occurs) was \$56,788 based on claims for 2019 (year ending September 30). After three full years on the market, Tagrisso has come to represent 0.1% of claimants and 2.4% of costs in the total cancer category.



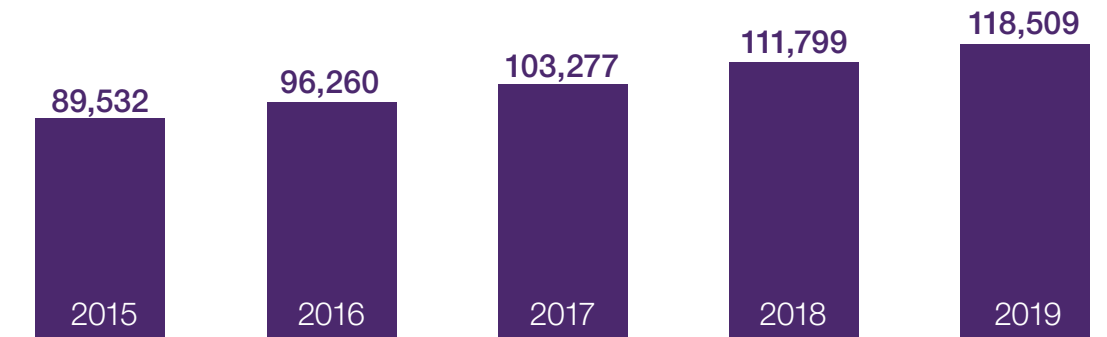
Chart 1 – Cancer: total eligible costs, 2015-2019 (\$ million)



Source: TELUS Health database for private drug plans; year ending September 30



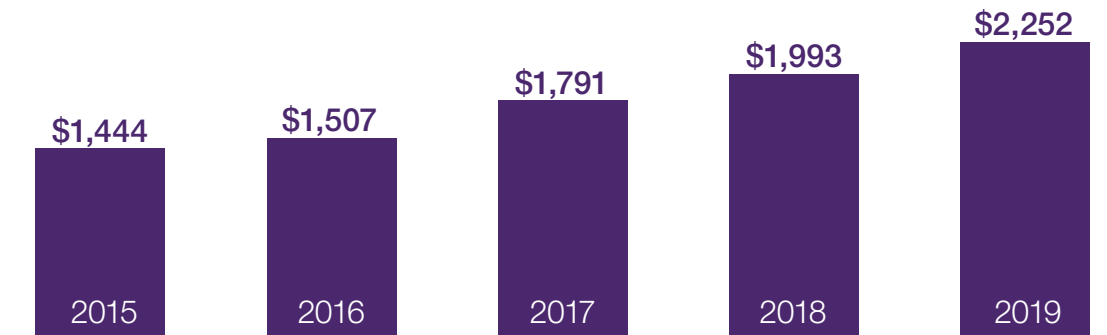
Chart 2 – Cancer: total claimants, 2015-2019



Source: TELUS Health database for private drug plans; year ending September 30



Chart 3 – Cancer: average eligible cost per claimant per treatment, 2015-2019



Source: TELUS Health database for private drug plans; year ending September 30

 Cholesterol drugs illustrate dual nature of drug plans.

The cholesterol category can be described as a microcosm of what's happening in the larger world of drug data trends. It illustrates the deflationary trend occurring among many traditional, high-volume drugs on the one hand, and the relatively disproportionate market share of high-cost specialty drugs on the other hand.

In this category, the specialty drugs are a class of biologics called PCSK9 inhibitors (i.e., proprotein convertase subtilisin/kexin type 9 inhibitors). Two PCSK9s are currently available in Canada: Repatha and Praluent.

Heavy genericization of traditional drugs has seen the category's average eligible cost per claimant per year steadily **decrease** over the past five years, despite the emergence of PCSK9s. For the 12 months ending September 30, 2019, the average annual cost per claimant was \$163, compared to \$219 in 2015 (a decrease of 25% over five years). Similarly, the average cost per claim for the total category decreased from \$41 in 2015 to \$30 in 2019 (a 26% decline).

The net result is a category where the growth in total eligible costs slowed in 2016 and 2017 and then reversed, so that costs in 2018 (\$173.1 million) were lower than in 2017 (\$185.2 million), and lower again in 2019 (\$164.4 million). What makes this even more noteworthy is the fact that the number of claimants is increasing with steady growth year after year. In 2019, the number of claimants for cholesterol medications surpassed one million for the first time.

Meanwhile, since launching in late 2015, the average annual cost for PCSK9s appears to have settled down at about \$4,800 (based on three full years of claims). The number of claimants has steadily climbed, reaching 2,676 in 2019—which represents only 0.3% of all those who sent in claims for cholesterol drugs. While those 0.3% do account for a disproportionate share of the dollar spend—8.2% of the total \$164.4 million for the category—their impact is overshadowed by the sheer volume of activity from the remaining 99.7% of claimants.

“ The sky has definitely not fallen with this category, despite early fears that a large number of patients would be put on PCSK9s. The proper cost controls have been put in place, namely prior authorization, and that has managed the impact, ” summarized Vishal Ravikanti, manager, professional services, for TELUS Health.

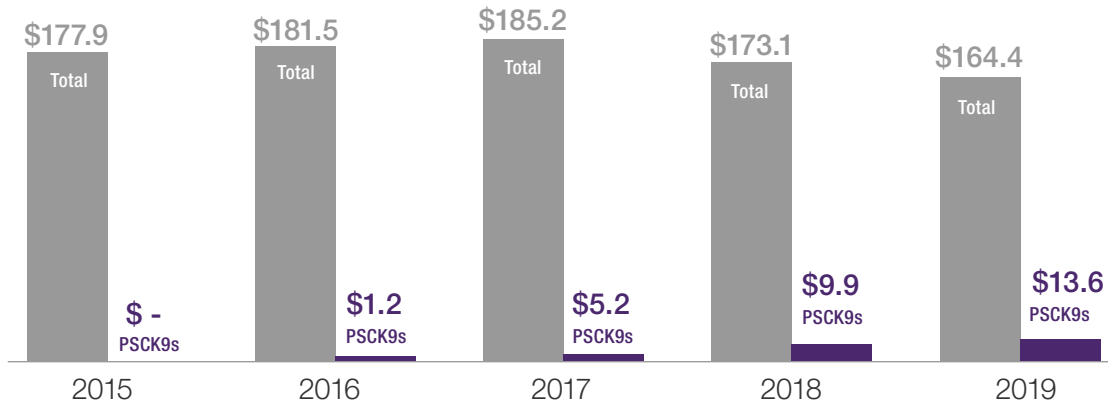
Having said that, utilization of PCSK9s will likely steadily grow. “Some industry experts feel that these drugs got off to a slow start, as clinicians waited for more persuasive outcomes data. Those studies are now being published,” said Jackson.

Clinical practice guidelines state that PCSK9s are indicated for individuals with cholesterol disorders due to a certain genetic condition, or who also have heart disease. The drug is a second line therapy, for people who are unable to bring their cholesterol to healthy levels despite taking maximum amounts of the first-line statin drugs.





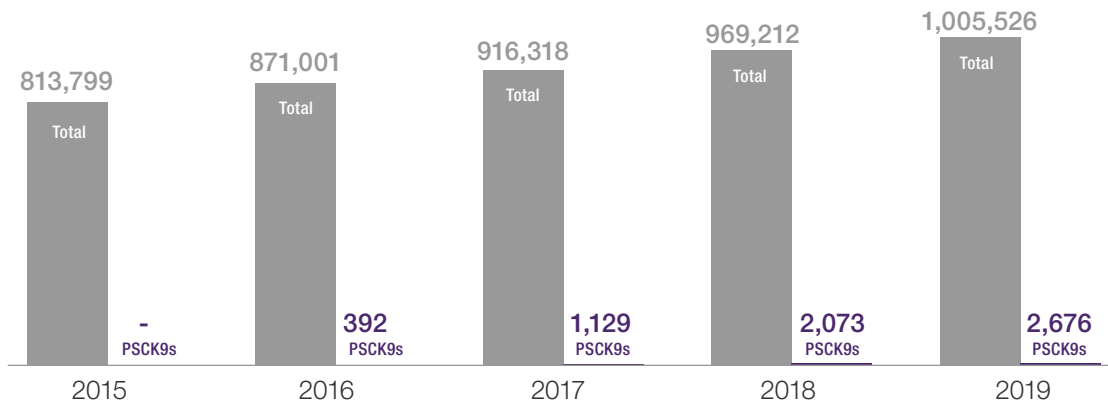
Chart 4 – Cholesterol: total eligible costs, 2015-2019 (\$ million)



Source: TELUS Health database for private drug plans; year ending September 30



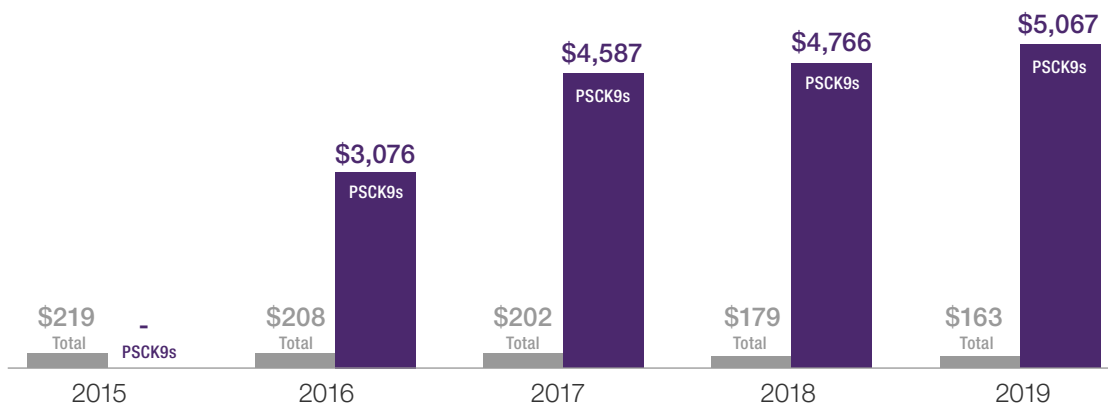
Chart 5 – Cholesterol: total claimants, 2015-2019



Source: TELUS Health database for private drug plans; year ending September 30



Chart 6 – Cholesterol: average eligible cost per claimant per year



Source: TELUS Health database for private drug plans; year ending September 30



CGRPs for migraine establish foothold.

Private drug plans began to see claims for Canada's first biologic to prevent migraines in late 2018. After almost a year, the new drug class—called calcitonin gene-related peptide (CGRP) inhibitors—accounted for 1% of claimants and 8.6% of migraine-related costs (or \$4.7 million out of the total of \$54.3 million).

The average cost per CGRP claimant based on 11 months of data was \$3,440, compared to \$387 for the total migraine treatment category. However, it should be noted that the average CGRP cost is likely artificially low at this point, given that most patients have not yet had a full year's worth of experience.

“It is still early days, and uptake is pretty much as expected for a new class,” observed Jackson. “Time will tell if the growing use of CGRPs will reduce utilization of the traditional migraine drugs and generate additional offsets, such as fewer sick days.”

Reduced utilization of traditional treatments and improved productivity are the anticipated results, given that these biologics prevent migraines in people who suffer most. “CGRPs definitely represent an advancement in treatment because they are preventative and aimed at those who are hardest hit,” said Ravikanti.

Two CGRPs are currently available in Canada: Aimovig and Emgality. They are indicated for people who experience episodic or chronic migraines, with at least four or more migraine days per month. People with chronic migraine experience 15 or more migraine days per month with the current patient population estimated to be about 750,000 Canadians, or about a quarter of all migraine sufferers. Research done in 2011 estimated the prevalence of [migraine overall to be 8.3% in Canada](#), which currently translates into about 3.1 million Canadians.

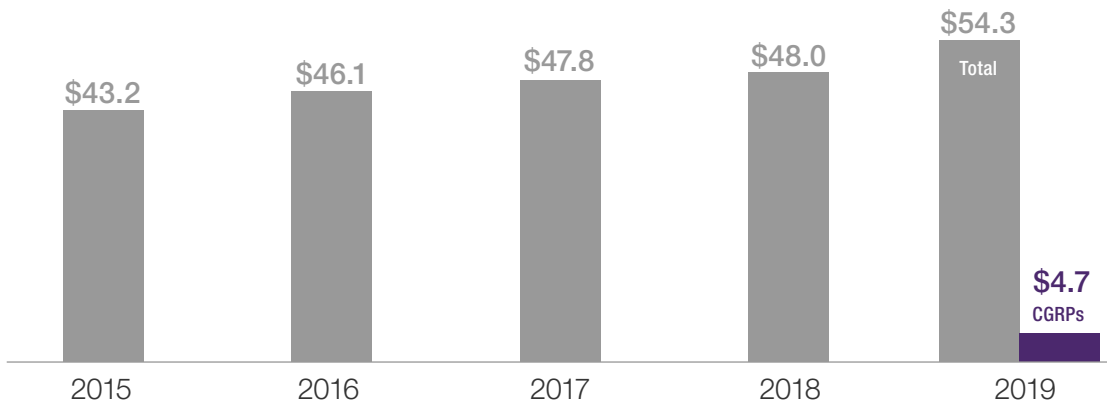
TELUS Health claims data suggest that the number of plan members claiming migraine drugs, at least in the working population, has increased in recent years. While [Statistics Canada reports](#) that Canada's population grew by 4% from 2015 to 2018, the number of claimants for migraine drugs jumped by 20% during the same time period. Claims grew by 26%. “More plan members are utilizing migraine therapy on a year-over-year basis, which may be due to an increase in the utilization of treatment or an increase in the identification of patients by physicians,” noted Ravikanti.

Added Jackson: “It will be interesting to see if the growth rate in claims for the entire category eventually falls behind the rate of growth of claimants, as this could be an indication that the new biologics are working well enough that people are using the acute treatments less often.”





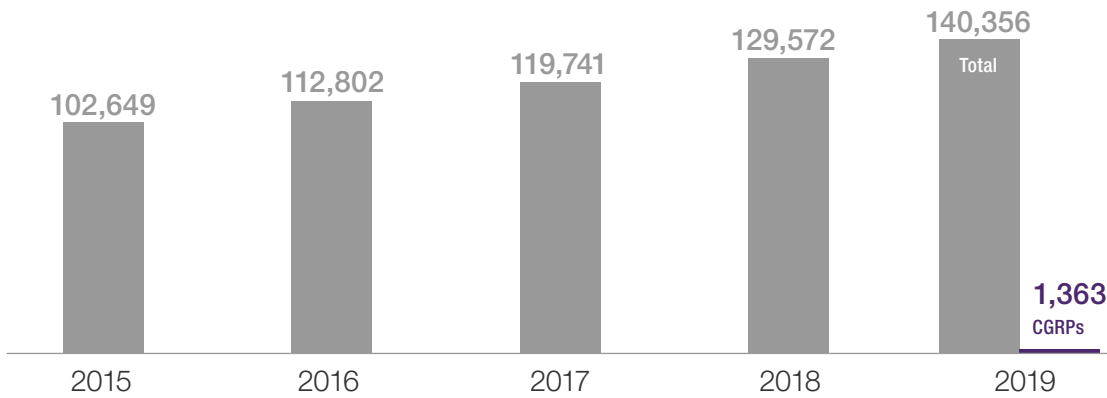
Chart 7 – Migraine: total eligible costs, 2015-2019 (\$ million)



Source: TELUS Health database for private drug plans; year ending September 30



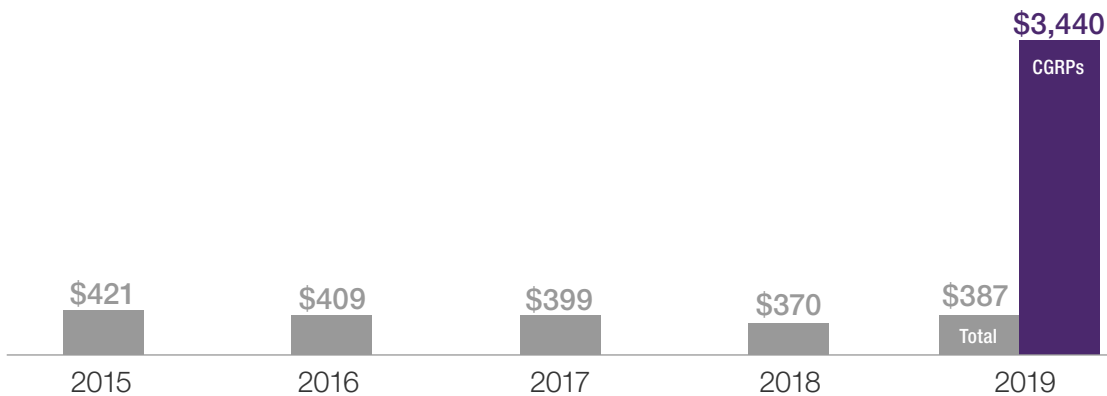
Chart 8 – Migraine: total claimants, 2015-2019



Source: TELUS Health database for private drug plans; year ending September 30



Chart 9 – Migraine: average eligible cost per claimant per year



Source: TELUS Health database for private drug plans; year ending September 30



Hepatitis C becoming “normalized”.

After its dramatic and financially shocking debut in 2014, uptake of the world's first cure for hepatitis C is clearly slowing down. “The warehouse of people who were all being put on treatment in 2014 and 2015 have finished their course of therapy and we are now getting into a normalized pattern of claims,” said Jackson.

The data for claimants saw a bit of a teeter-totter effect from 2015 to 2018, ranging from about 860 to about 1,050, before the numbers decisively dropped to 697 claimants in 2019 (year ending September 30).

““ We haven’t quite levelled off yet, but the numbers will soon be at a steady rate that reflects the natural incidence of hepatitis C. In other words, claims will be coming from new patients only, ”” stated Ravikanti.

Eligible costs, meanwhile, plummeted by 36% in 2016 to \$47.9 million, from \$74.6 million in 2015. Costs remained at about \$50 million per year until dropping by 35% in 2019, to \$31.1 million. The average annual eligible cost per claimant was \$44,544, a decrease of 37% compared to 2015 (\$71,018).

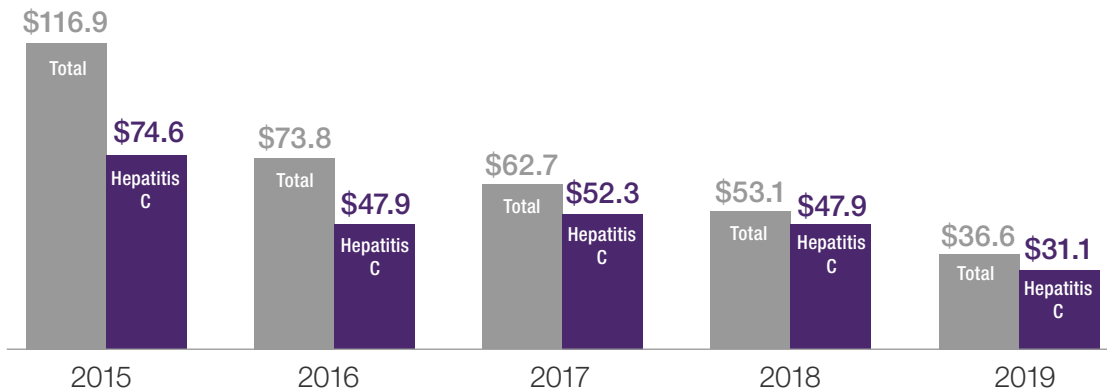
“Competitive pressures have led to newer drugs coming in at lower price points. They are also more effective, with treatment periods of up to eight weeks versus as many as 24 weeks for the first wave of new hep C drugs, and that’s helped drop the number of claims as well as total treatment costs,” noted Jackson.

As part of the total hepatitis category, which includes treatments for hepatitis B, the new hepatitis C drugs accounted for 84.9% of eligible costs, 25.1% of claimants and 33.7% of claims in 2019.





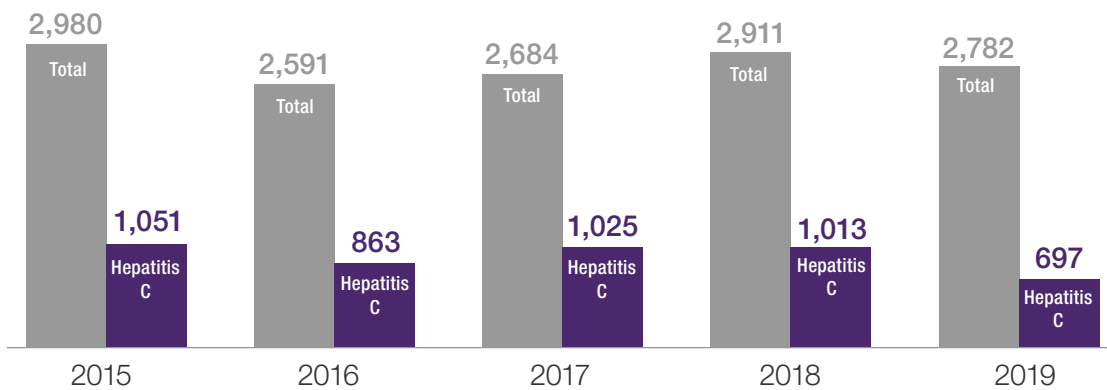
Chart 10 – Hepatitis: total eligible costs, 2015-2019 (\$ million)



Source: TELUS Health database for private drug plans; year ending September 30



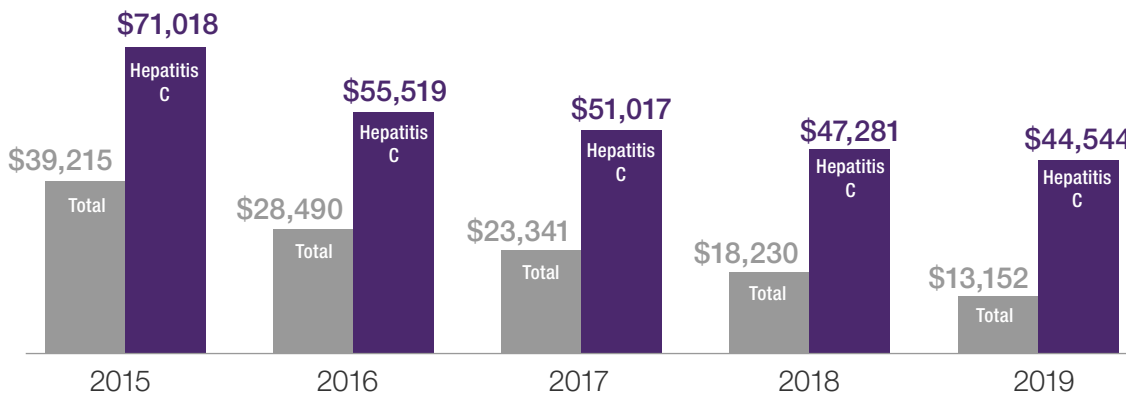
Chart 11 – Hepatitis: total claimants, 2015-2019



Source: TELUS Health database for private drug plans; year ending September 30



Chart 12 – Hepatitis: average eligible cost per claimant per treatment



Source: TELUS Health database for private drug plans; year ending September 30



New anti-obesity drugs overtake category.

Since entering the market five years ago, new anti-obesity drugs have easily come to dominate the category for weight management: in 2019 (year ending September 30), they accounted for 91% of eligible costs, 79.1% of claimants and 80.5% of claims in the past year. The average cost per claimant per year was \$1,766 in 2019, virtually unchanged from the previous two years.

The category has also increased by more than tenfold since the new anti-obesity drugs came on the market. Having said all that, total eligible costs for the category amounted to just \$15.3 million, barely a sliver of the more-than \$5.5 billion in total eligible costs adjudicated by TELUS Health for all drug categories.

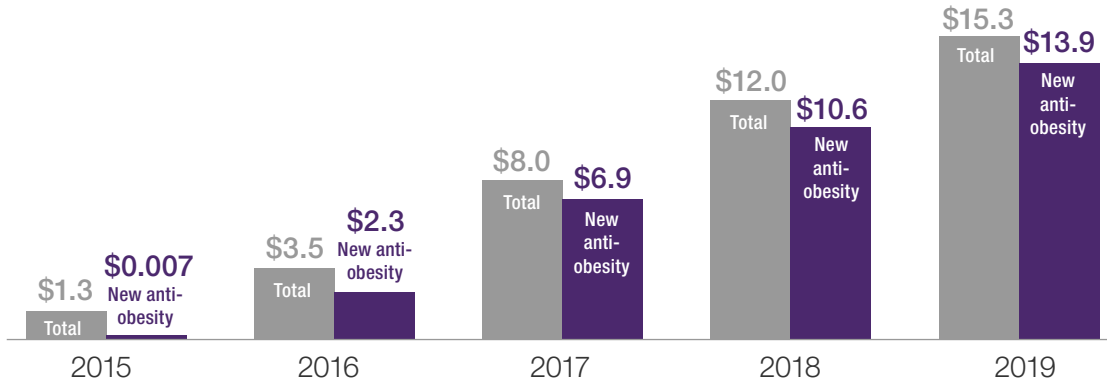
“ It remains a small category. A lot of plans specifically exclude lifestyle drugs, and weight loss drugs are still in that bucket, ” explained Jackson.

Manufacturers of the new anti-obesity drugs are working hard to change that, given the causal link between obesity and many other chronic conditions (including high blood pressure, high cholesterol, diabetes, depression and arthritis). The newer anti-obesity drugs' mechanism of action differs significantly from that of previous drugs, with proven weight loss results, and does not cause some of the severe side effects of the older drugs.

Twenty-seven percent of Canadians are obese and 34% are overweight, according to the 2016/2017 Canadian Health Measures Survey by Statistics Canada. Prescribing criteria for Saxenda or Contrave, the two new anti-obesity drugs currently available in Canada, indicate that the medication be used as an adjunct therapy for people with a BMI of 30 (the threshold for obesity) or a BMI of 27 with weight-related comorbidities (e.g., hypertension), and who are actively pursuing lifestyle interventions (e.g., increased physical activities).



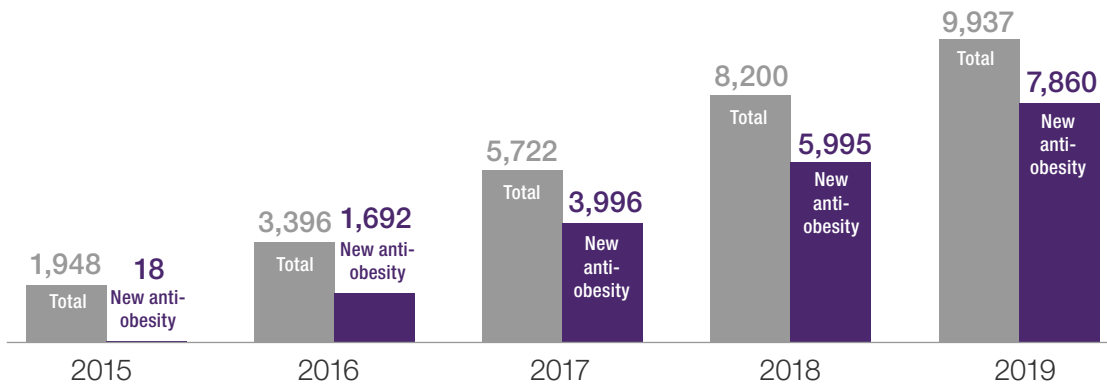
Chart 13 – Weight management: total eligible costs, 2015-2019 (\$ million)



Source: TELUS Health database for private drug plans; year ending September 30



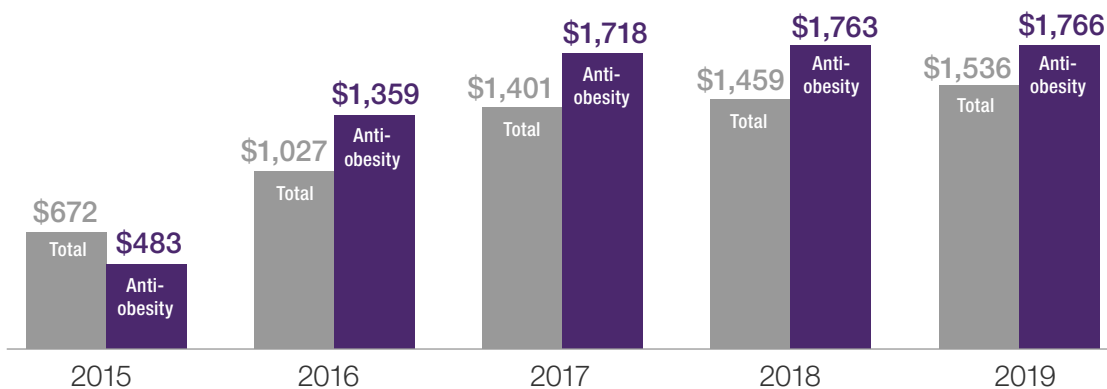
Chart 14 – Weight management: total claimants, 2015-2019



Source: TELUS Health database for private drug plans; year ending September 30



Chart 15 – Weight management: average eligible cost per claimant per year



Source: TELUS Health database for private drug plans; year ending September 30

Summary

In all five categories examined in this report, new drugs that represent advances in treatment have had very different impacts. At the same time, prior authorization based on prescribing criteria is an important common denominator, as a mechanism to ensure appropriate utilization and prevent off-label use.

At \$266.8 million in eligible costs in 2019 (year ending September 30), cancer is the largest category addressed in this report. The category now also ranks sixth among all categories adjudicated by TELUS Health, and shows steady growth year after year in terms of claimants, claims, eligible costs and costs per claimant. While the number of claimants is still very low relative to other categories, the pipeline for cancer drugs—replete with advanced therapies at much higher costs—increases the risk that a handful of claims could have a noticeable negative impact on a private drug plan.

In the cases of hepatitis and weight management, the new drugs quickly came to dominate their respective categories in terms of costs and, in the case of weight management, claimants. The relatively small sizes of these categories largely blunt their impact on private drug plans, although possibly less so among smaller plans. Hepatitis C claims will have less effect in coming years, as the utilization of these drugs normalizes to treat newly diagnosed patients only. For the new anti-obesity drugs, more private plans may opt to cover these, given their potential to offset costs associated with other chronic diseases.

In both the cholesterol and migraine categories, perhaps equal attention should be paid to growth rates overall in addition to the impact of new high-cost entries. In the cholesterol category, where four full years of data are available, access to the new PCSK9s appears to be limited to a well-defined patient population. Yet in general, both the cholesterol and migraine categories have experienced noteworthy growth in the number of claimants over the past five years. This growth is independent of the new advances in treatment, which suggests that employers, benefits providers and stakeholders in the healthcare system may benefit from doing more in the areas of prevention, medication adherence and self-care support.

Chart 16 – Summary of the five drug categories, 2019

Category	Total eligible costs (\$ millions)	Total claimants	Total eligible cost per claimant
Cancer total category	\$266.8	118,509	\$2,252
Tagrisso	\$6.5	114	\$52,881
Tagrisso as % of category	2.4%	0.1%	
Cholesterol total category	\$164.4	1,005,526	\$163
PCSK9 inhibitors	\$13.6	2,676	\$5,067
PCSK9s as % of category	8.2%	0.3%	
Migraine total category	\$54.3	140,356	\$387
CGRP inhibitors	\$4.7	1,363	\$3,440
CGRPs as % of category	8.6%	1.0%	
Hepatitis total category	\$36.6	2,782	\$13,152
Hepatitis C drugs	\$31.1	697	\$44,544
Hepatitis C as % of category	84.9%	25.1%	
Weight management total category	\$15.3	9,937	\$1,536
Anti-obesity drugs	\$13.9	7,860	\$1,766
Anti-obesity as % of category	91.0%	79.1%	



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