



CRA Insights: Life Sciences

CRA Charles River
Associates

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PMPRB: Where do we go from here?

Introduction

After multiple delays, the PMPRB (Patented Medicine Prices Review Board) is expected to implement revised guidelines within 2022, which include an update to the reference basket of international price comparator countries. These changes are likely to drive a significant reduction in the list price ceiling for new medicines launching in Canada, affecting existing pricing and access decision-making processes and decreasing manufacturer willingness to invest in the Canadian market.

PMPRB: overview of key changes

The PMPRB regulates the ceiling prices of patented medicines sold in Canada and reports on pricing trends in the pharmaceutical industry. It has a statutory mandate to protect Canadians from excessive medicine prices. After multiple delays, revised guidelines governing the process by which the PMPRB assesses whether a patented medicine is priced excessively are expected to come into effect within 2022. The most significant changes in the guidelines include:¹

- Update to the reference basket of international price comparator countries from “PMPRB7” (France, Germany, Italy, Sweden, Switzerland, the United Kingdom and the United States) to “PMPRB11” (Australia, Belgium, France, Germany, Italy, Japan, the Netherlands, Norway, Spain, Sweden, and the United Kingdom)
- For certain new medicines, consideration of pharmacoeconomic value in Canada, including cost per quality-adjusted life year (QALY), size of market across players, and annual per-patient cost in relation to per-capita GDP

Under the new guidelines, list price ceiling for new medicines will be set using the median list price of the PMPRB11. New medicines classified as “Category I” (treatment cost >150% GDP per capita or Canadian sales >\$50M) could also be subject to a “maximum rebated price”, in circumstances where they fail to comply with the median list price ceiling from PMPRB11 and a

¹ Patented Medicines Prices Review Board (2020), available at [<https://www.canada.ca/en/patented-medicine-prices-review/services/legislation/about-guidelines/guidelines.html>]

further investigation is triggered. The maximum rebated price will be in part based on a pharmacoeconomic value assessment determining cost / QALY. This data will likely be sourced from the national health technology assessment agency (HTA), Canadian Agency for Drugs and Technologies in Health (CADTH) and the Quebec-specific HTA, Institut national d'excellence en santé et services sociaux (INESSS) reviews. Depending on cost / QALY, a 20-50% reduction off the maximum list price will be applied.

List price ceiling for existing medicines (grandfathered, line extensions) will be set using the lower of the highest list price from the PMPRB11 or ceiling price from the previous PMPRB guidelines. For gap medicines (filed on or after August 21, 2019 and first sold prior to July 1, 2021), the list price ceiling will be set using the lower of the median list price from the PMPRB11 or ceiling price under the previous PMPRB guidelines.

Impact of PMPRB amendments

The change in the price reference basket is expected to significantly decrease the price ceiling due to the removal of the US and Switzerland, which were the highest and third-highest priced countries in the OECD region in 2019.² To understand the impact of the reference basket change, CRA performed an analysis using four case study medicines from a variety of indications representing a range of scenarios including differences in unmet need, patient volume, competitive landscape, and cost (see Table 1).

Table 1: Case study products chosen for further analysis to examine impact of new PMPRB guidelines

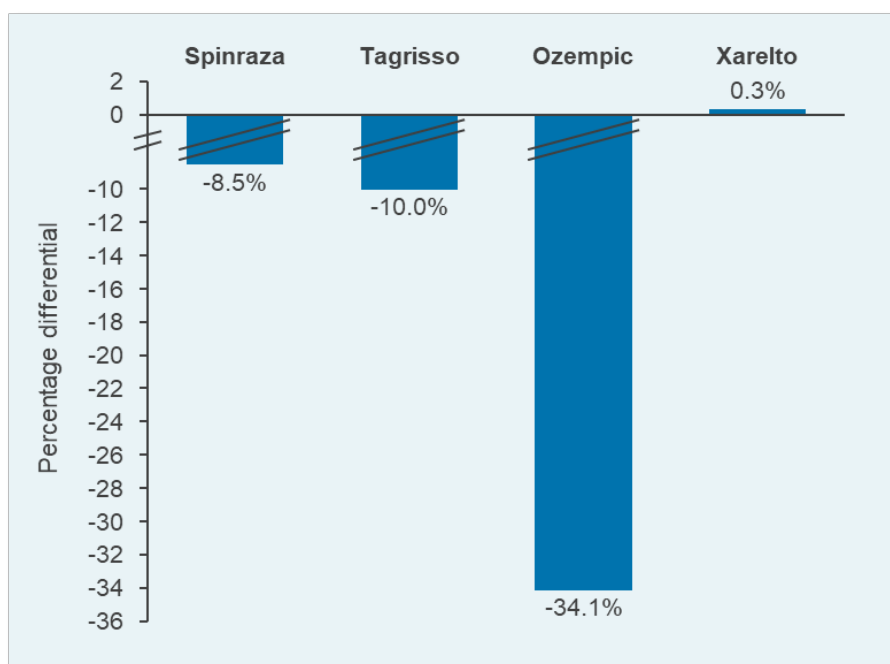
Drug	Manufacturer	Approved indications in Canada	Canadian list price (CAD)	Average annual cost (CAD)	Year of first approval
Spinraza® (nusinersen)	Biogen	Spinal muscular atrophy	\$118,000 per 5 mL vial	~\$354,000 (maintenance)	2017
Tagrisso® (osimertinib)	AstraZeneca	EGFR mutated non-small cell lung cancer	\$294.68 per 40 or 80 mg tablet	~\$107,600	2016
Ozempic® (semaglutide)	Novo Nordisk	Type 2 diabetes mellitus	\$195.06 per (2 or 4 mg) pre-filled pen	~\$2,500	2018
Xarelto® (rivaroxaban)	Bayer	Prevention of stroke in patients with coronary/ peripheral artery disease; atrial fibrillation; prevention of thromboembolic events post-total hip or knee replacement surgery	\$2.84 per 10, 15 or 20 mg tablet; \$1.44 per 2.5 mg tablet	~\$1,050	2008

Sources: Government of Canada, Drug and health products; CADTH Common Drug Review Pharmacoeconomic Review Reports (2015 – Xarelto; 2018 – Spinraza; 2019 – Tagrisso / Xarelto / Ozempic).

² Patented Medicines Prices Review Board Annual report (2019), available at [\[https://www.canada.ca/en/patented-medicine-prices-review/services/annual-reports/annual-report-2019.html\]](https://www.canada.ca/en/patented-medicine-prices-review/services/annual-reports/annual-report-2019.html)

Using the case studies as a reference point, CRA first examined the potential differences between ceiling price derived under the previous vs. new PMPRB guidelines. We compared the maximum average potential price (MAPP) derived from the previous PMPRB guidelines and the median list price from PMPRB11 that would apply under the new guidelines. In this scenario, the ceiling price decreases for Spinraza, Tagrisso, and Ozempic (see Figure 1) under the new PMPRB guidelines.

Figure 1: Comparison of price ceiling derived using MAPP (old ceiling) vs. PMPRB11 median list price (new ceiling) assuming new product entry

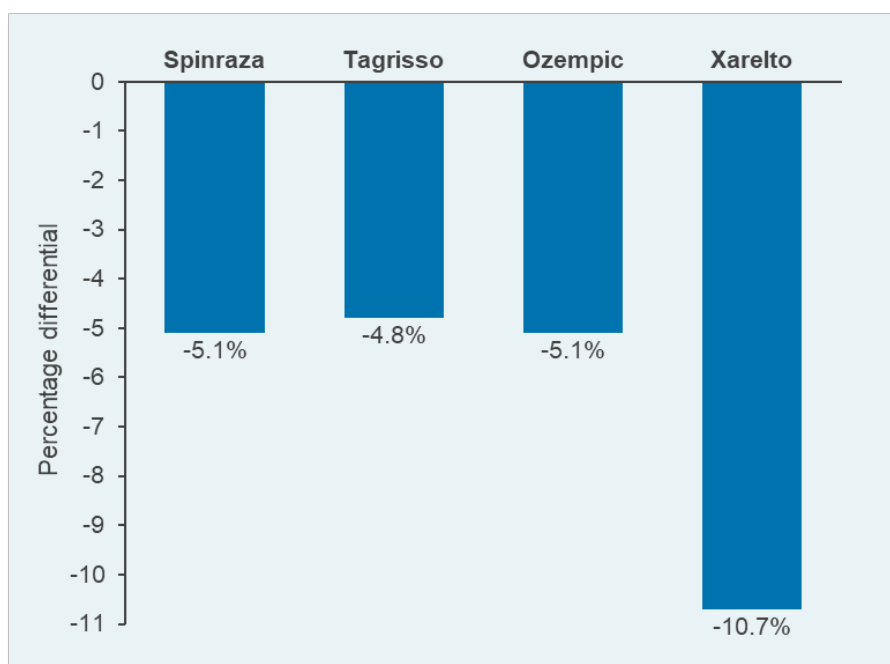


Sources: Canada MAPP - PMPRB; France list price – Ameli.fr; Germany list price – Lauer-fischer.de; Italy list price – GazzettaUfficiale.it; Spain list price – vademecum.es; UK list price – MIMS; Sweden list price – tlv.se; US WAC price – RedBook; Switzerland list price – BAG; Australia list price – PBS; Belgium list price – Inami.be; Netherlands list price – medicijnkosten.nl; Norway list price – legemiddelsok.no; Japan list price – MHLW.

Note: Prices were pulled for similar packs across markets for direct comparison. In the U.S. market, the current WAC prices were adjusted downwards according to the amount of AWP price increase from the MAPP timepoint to today.

We then considered a second scenario in which the reference baskets themselves are compared. Here we evaluated the difference in price ceiling derived using the 'old' PMPRB7 reference basket vs. the 'new' PMPRB11 reference basket on a median list price basis. As seen in Figure 2, the price ceiling derived under the new PMPRB11 reference basket decreases across all case study products from 5-11%. Taken together it is highly likely that under the new PMPRB guidelines, new products may be subject to a significantly lower price ceiling when compared with the old guidelines – due to the difference in the PMPRB11 reference price.

Figure 2: Comparison of price ceiling derived using median list of PMPRB7 (old reference basket) vs. median list of PMPRB11 (new reference basket) assuming new product entry

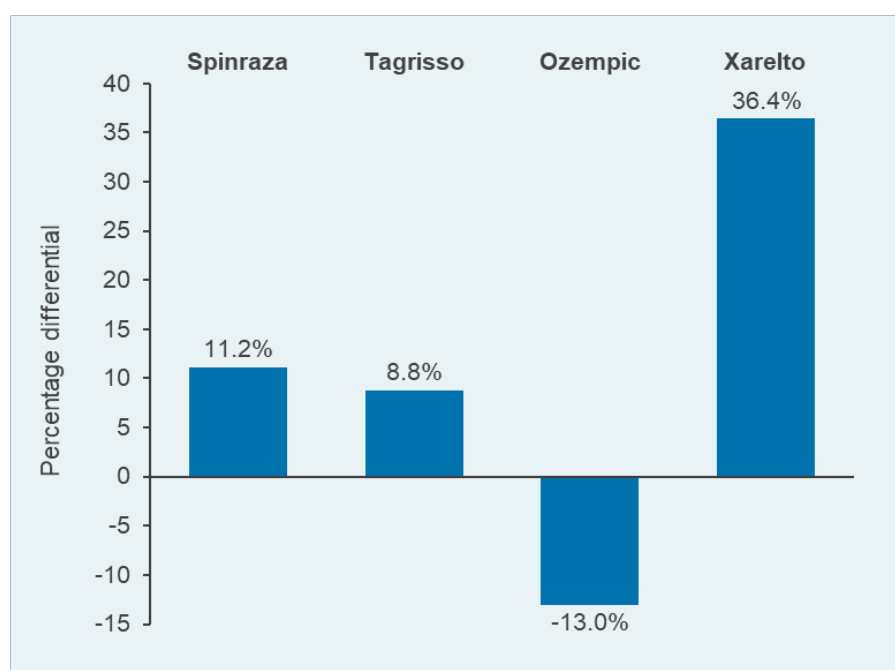


Sources: Canada MAPP - PMPRB; France list price – Ameli.fr; Germany list price – Lauer-fischer.de; Italy list price – GazzettaUfficiale.it; Spain list price – vademecum.es; UK list price – MIMS; Sweden list price – tlv.se; US WAC price – RedBook; Switzerland list price – BAG; Australia list price – PBS; Belgium list price – Inami.be; Netherlands list price – medicijnkosten.nl; Norway list price – legemiddelsok.no; Japan list price – MHLW.

Note: Prices were pulled for similar packs across markets for direct comparison. In the U.S. market, the current WAC prices were adjusted downwards according to the amount of AWP price increase from the MAPP timepoint to today.

As opposed to new launches, products already marketed in Canada may instead be subject to the lower of the existing reference price ceiling (MAPP) or the PMPRB11 basket. From Figure 3, we can see that, other than Ozempic, the case study products are not subject to a price ceiling decrease as a result of the revised PMPRB guidelines given that the existing price ceiling is lower than the calculated maximum PMPRB11 ceiling price. In this instance, Ozempic has faced indication expansions since launch and delisting in other countries which may have affected its reference price in Canada according to the reference basket.

Figure 3: Comparison of price ceiling derived using MAPP (old ceiling) vs. PMPRB11 maximum list price (new ceiling) assuming existing products



Sources: Canada MAPP - PMPRB; France list price – Ameli.fr; Germany list price – Lauer-fischer.de; Italy list price – GazzettaUfficiale.it; Spain list price – vademecum.es; UK list price – MIMS; Sweden list price – tlv.se; US WAC price – RedBook; Switzerland list price – BAG; Australia list price – PBS; Belgium list price – Inami.be; Netherlands list price – medicijnkosten.nl; Norway list price – legemiddelsok.no; Japan list price – MHLW.

Note: Prices were pulled for similar packs across markets for direct comparison. In the U.S. market, the current WAC prices were adjusted downwards according to the amount of AWP price increase from the MAPP timepoint to today.

By comparing the price ceilings derived under the old (both the published MAPP and the PMPRB7 reference basket) vs. new PMPRB guidelines, CRA has noted the following key learnings.

- The overall price ceiling for newly launching products is likely to be significantly lower under the new PMPRB guidelines when compared to the old PMPRB guidelines
- The decrease in price ceiling is driven by the change in the reference basket of countries under the new PMPRB guidelines
- Existing products may face less price pressure than new products, except in cases where there is a significant differential between Canada and other markets
- Products that have faced price decreases after indication expansion or have been delisted in other countries (e.g., Ozempic) since their launch in Canada may be particularly at risk

Future outlook

With these significant changes, there are likely to be undesirable – and perhaps unintended – consequences affecting the pharmaceutical market in Canada.

From the manufacturer perspective, there is a real risk of deprioritized investment in the Canadian market as companies seek to mitigate the negative impacts of a list price decrease in Canada on international reference pricing. Manufacturers may begin to delay launch, launch without a patent, or choose not to market in Canada at all.

Within the Canadian healthcare market, the PMPRB guideline update may drive changes to the existing pricing and market access process. If the PMPRB begins to incorporate pharmacoeconomic analysis, this may bring into question the purpose and impact of the existing health technology assessment agencies, CADTH and INESSS, which execute clinical and economic evaluations and inform reimbursement decision-making within Canada. Putting additional pressure on manufacturers at the list price level may decrease willingness to negotiate on a net price basis which could drive changes in the product listing process at both pan-Canadian Pharmaceutical Alliance (pCPA) and private plan levels – potentially reducing timelines and simplifying (or cancelling) negotiations. Additionally, the updated PMPRB guidelines are seen by some as the first step in efforts to create a national pharmacare program in Canada. Pharmacare proposals include implementation of a national Canadian Drug Agency (CDA) which would assess cost-effectiveness of new medicines and negotiate prices on behalf of public drug plans – essentially duplicating the roles of CADTH / INESSS and pCPA – with the intent to reduce drug costs. However, with the PMPRB reforms in place, questions remain as to the utility of such an agency, since drug costs will already be significantly reduced at the list level.

In the aftermath of the COVID-19 pandemic, public health plans are struggling with crushing deficits in healthcare budgets, with the potential to indirectly impact drug budgets. The PMPRB reforms may offer some relief in terms of reducing spending on new medicines. However, these come at the cost of decreased confidence and investment in the Canadian market. Innovative access agreements can provide budget predictability with utilization of payment-by-results, value-based, and / or conditional reimbursement arrangements and help to improve public and private payer affordability. While these agreements are not likely to make up the shortfall caused by the PMPRB guidelines, they may provide an option for pharmaceutical manufacturers to manage the amount of net price discounting while securing access to new medicines for patients who need them most.

About the authors

Ashley Fraser is a Principal in CRA's Life Sciences Practice. Ashley has twelve years of strategic pricing and market access consulting experience across global markets including Canada.

Clara Zacharko is an Associate in CRA's Life Sciences Practice. Clara works across strategy and policy consulting with experience in Canadian, US, and EU markets.

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Contacts

Ashley Fraser

Principal

+1-416-413-4099

afraser@crai.com

Clara Zacharko

Associate

+1-416-323-5551

czacharko@crai.com



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