Regulating Drug Prices

National and Global Implications of Canada’s Recent Reforms

Tuesday, 17 December 2019 | 4:00pm-5:00pm CET

Webinar
• The PMPRB is an independent, quasi-judicial, consumer protection agency that carries out its mandate at arm’s length from the Minister of Health.

• It was established by Parliament in 1987 under the Patent Act (Act), to ensure that the prices of patented medicines sold in Canada are not excessive.

• PMPRB is a “consumer protection pillar” established as a counter-balance to the market exclusivity afforded to patent medicines through the Act, which eliminated compulsory licensing.

• The PMPRB regulatory framework reposes on three legal instruments:

  - **Patent Act**
    - Sections 79-103
    - Excessivity factors, mandate, jurisdiction, structure and powers of the Board

  - **Patented Medicines Regulations**
    - Comparator countries and reporting requirements: e.g. prices of medicines, R&D investment

  - **Guidelines**
    - (non-binding)
    - Scientific and price review process, price tests for new and existing drugs

• The regulatory framework has remained virtually unchanged since the PMPRB’s founding.
The PMPRB is part of a complex regulatory and reimbursement ecosystem.

- Review for Safety, Efficacy and Quality
- Excessive Price Monitoring and Investigation
- Health Technology Assessment
- Price negotiation
- Reimbursement decision
- Public plans
- CADTH
- pCPA
- INESS
- Hospitals and Health Authorities
- Private plans
- Some price negotiation

Patient access:
- Public: 43%
- Private: 37%
- Out-of-pocket: 21%

Prescription drug spending, 2018 (CIHI)
How the PMPRB sets ceiling prices currently

New patented medicines are assessed for level of therapeutic benefit relative to existing therapies and are assigned a ceiling price that is based on one, or a combination of the following:

1. The median international price based on the PMPRB7;
2. The highest price in the domestic therapeutic class;

After entering the market, the price of a medicine can increase in keeping with the Consumer Price Index (CPI) but never to the point of becoming highest of the PMPRB7.

Where PMPRB staff and a patentee disagree on whether a medicine is excessively priced, a hearing may be held before PMPRB Board Members.

If the Board decides a medicine is excessively priced, the patentee is ordered to reduce its price and/or pay back excess revenues.

Given the significant changes in the pharmaceutical environment in recent years, it has been increasingly challenging for the PMPRB to fulfill its consumer protection mandate under the current regulatory framework.
Our basket of comparators – the PMPRB7 – is made up of premium priced countries and includes the US, an international outlier.

PMPRB price review is based on publicly available list prices, which are increasingly divorced from the true price net of confidential rebates/discounts.

Internal and external price referencing are insufficient tools to regulate the new wave of very high-cost medicines that is coming to dominate the market.

All medicines are subject to the same level of regulatory scrutiny, regardless of the risk of excessive pricing.

PMPRB sets ceiling prices for medicines at introduction and does not reassess over time to ensure that they remain reasonable/non-excessive.

<table>
<thead>
<tr>
<th>Country</th>
<th>Price Ratio</th>
</tr>
</thead>
<tbody>
<tr>
<td>US</td>
<td>1.00</td>
</tr>
<tr>
<td>Switzerland</td>
<td>0.90</td>
</tr>
<tr>
<td>Canada</td>
<td>0.90</td>
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<tr>
<td>Germany</td>
<td>0.90</td>
</tr>
<tr>
<td>New Zealand</td>
<td>0.90</td>
</tr>
<tr>
<td>Mexico</td>
<td>0.90</td>
</tr>
<tr>
<td>Japan</td>
<td>0.90</td>
</tr>
<tr>
<td>Chile</td>
<td>0.90</td>
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<tr>
<td>Austria</td>
<td>0.90</td>
</tr>
<tr>
<td>Sweden</td>
<td>0.90</td>
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<tr>
<td>Italy</td>
<td>0.90</td>
</tr>
<tr>
<td>Finland</td>
<td>0.90</td>
</tr>
<tr>
<td>UK</td>
<td>0.90</td>
</tr>
<tr>
<td>Ireland</td>
<td>0.90</td>
</tr>
<tr>
<td>OECD Member</td>
<td>0.90</td>
</tr>
<tr>
<td>Hungary</td>
<td>0.90</td>
</tr>
<tr>
<td>Spain</td>
<td>0.90</td>
</tr>
<tr>
<td>Netherlands</td>
<td>0.90</td>
</tr>
<tr>
<td>Belgium</td>
<td>0.90</td>
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<tr>
<td>Luxembourg</td>
<td>0.90</td>
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<tr>
<td>Norway</td>
<td>0.90</td>
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<tr>
<td>France</td>
<td>0.90</td>
</tr>
<tr>
<td>Australia</td>
<td>0.90</td>
</tr>
<tr>
<td>Portugal</td>
<td>0.90</td>
</tr>
<tr>
<td>Slovenia</td>
<td>0.90</td>
</tr>
<tr>
<td>Czech Republic</td>
<td>0.90</td>
</tr>
<tr>
<td>Poland</td>
<td>0.90</td>
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<tr>
<td>Greece</td>
<td>0.90</td>
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<tr>
<td>Estonia</td>
<td>0.90</td>
</tr>
<tr>
<td>Slovenia</td>
<td>0.90</td>
</tr>
<tr>
<td>South Korea</td>
<td>0.90</td>
</tr>
<tr>
<td>Turkey</td>
<td>0.90</td>
</tr>
</tbody>
</table>

Canadian prices are **3rd** highest in the OECD.
The path to framework reform

- PMPRB Discussion paper on Guideline reform
- Health Canada pre-consultation on regulatory amendments
- Health Canada Canada Gazette I
  - May 2016
  - May 2017
  - December 2017
- Health Canada Canada Gazette II
  - December 2017
  - December 2017
  - August 2019
  - November 2019

- PMPRB Guidelines scoping paper
  - December 2017

- PMPRB Draft Guidelines
  - August 2019
August 2019: Canada announces “...biggest step to lower drug prices in a generation.”

Proposed new drug regulations will hurt all Canadians — and Ottawa has been warned

Opinion: Changes which aim to make prescriptions more affordable could shut off entry of new drugs

Drug policy experts accuse industry and patient groups of ‘fearmongering’ with concerns about new drug-pricing rules

Canadians currently pay among the highest patented drug prices in the world, behind only the United States and Switzerland
Provide the PMPRB with modern tools and information it needs to protect Canadians from excessive medicine prices:

1. **Benchmarking prices against countries that are more like Canada** economically and from a consumer price protection standpoint.

2. **Considering the value and the overall affordability of a medicine** when setting the maximum price.

3. **Regulating at the level of the actual prices being charged by patentees in Canada** and not just the non-transparent manufacturer list prices.

Although Canada is the only country with a regulator that caps patented medicine prices, it is adopting best practices in most other developed countries by considering value and affordability.
New basket of countries
Applies to all patented medicines

<table>
<thead>
<tr>
<th>Previous comparator countries: PMPRB7</th>
<th>Foreign-to-Canadian price ratio</th>
<th>New comparator countries: PMPRB11</th>
</tr>
</thead>
<tbody>
<tr>
<td>France</td>
<td>0.75</td>
<td>0.75</td>
</tr>
<tr>
<td>Germany</td>
<td>1.12</td>
<td>1.12</td>
</tr>
<tr>
<td>Italy</td>
<td>0.95</td>
<td>0.95</td>
</tr>
<tr>
<td>United Kingdom</td>
<td>0.94</td>
<td>0.94</td>
</tr>
<tr>
<td>Sweden</td>
<td>0.93</td>
<td>0.93</td>
</tr>
<tr>
<td>Switzerland</td>
<td>1.12</td>
<td>Australia</td>
</tr>
<tr>
<td></td>
<td></td>
<td>0.74</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Belgium</td>
</tr>
<tr>
<td></td>
<td></td>
<td>0.79</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Japan</td>
</tr>
<tr>
<td></td>
<td></td>
<td>0.92</td>
</tr>
<tr>
<td>United States</td>
<td>3.36</td>
<td>Netherlands</td>
</tr>
<tr>
<td></td>
<td></td>
<td>0.80</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Norway</td>
</tr>
<tr>
<td></td>
<td></td>
<td>0.78</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Spain</td>
</tr>
<tr>
<td></td>
<td></td>
<td>0.80</td>
</tr>
</tbody>
</table>

Canada Gazette Part II (CGII)
6. The schedule to the Regulations is replaced by the schedule set out in the schedule to these Regulations.

SCHEDULE (Subparagraph 4(1)(f)(iii)
Australia, Belgium, France, Germany, Italy, Japan, Netherlands, Norway, Spain, Sweden, United Kingdom

Countries with similar consumer protection priorities, economic wealth and marketed medicines as Canada
Canada Gazette Part II (CGII): 4.4 [...] the other factors that the Board shall take into consideration to determine whether a medicine that is sold in any market in Canada after June 30, 2020 is being or has been sold at an excessive price are the following:

(a) the medicine’s pharmacoeconomic value in Canada;
(b) the size of the market for the medicine in Canada; and
(c) the gross domestic product in Canada and the gross domestic product per capita in Canada.

<table>
<thead>
<tr>
<th>Factor</th>
<th>Description</th>
<th>Comparator countries that consider these same factors</th>
</tr>
</thead>
<tbody>
<tr>
<td>Value for Money</td>
<td>The PMPRB will consider the opportunity cost of a medicine in the health system when evaluating if a price is excessive.</td>
<td>🇦🇺 🇳🇱 🇫🇷 🇺🇸 🇨🇦</td>
</tr>
<tr>
<td>Size of the market</td>
<td>PMPRB will consider the economic impact from the sales for the medicine when evaluating if a price is excessive.</td>
<td>🇦🇺 🇳🇱 🇫🇷 🇺🇸 🇨🇦</td>
</tr>
<tr>
<td>GDP and GDP per capita</td>
<td>These measures are a proxy of what the entirety of the Canadian population, or the individual consumers can afford to pay for the new patented medicines</td>
<td>🇦🇺 🇳🇱 🇫🇷 🇺🇸 🇨🇦</td>
</tr>
</tbody>
</table>
Canada Gazette Part II (CGII): 3(4) […]

(a) in calculating the average price per package of a medicine, the actual price obtained by the patentee shall be used, taking into account any adjustments that are made by the patentee or any party that directly or indirectly purchases the medicine or reimburses for the purchase of the medicine and any reduction given to any party in the form of free goods, free services, gifts or any other benefit of a like nature;

Modernized reporting requirements for patentees
Providing information relating to third-party rebates
### Overview of the new PMPRB regulatory framework

 Regulations come into force on July 1, 2020

<table>
<thead>
<tr>
<th>Existing factors (as per the Patent Act)</th>
<th>Previous regulations</th>
<th>Amended regulations</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>CPI changes</strong></td>
<td>√</td>
<td>√</td>
</tr>
<tr>
<td><strong>Internal price referencing</strong></td>
<td>√</td>
<td>√</td>
</tr>
<tr>
<td><strong>External price referencing</strong></td>
<td></td>
<td><strong>PMPRB11:</strong> Australia, Belgium, France, Germany, Italy, Japan, Netherlands, Norway, Spain, Sweden, United Kingdom</td>
</tr>
<tr>
<td></td>
<td>PMPRB7: France, Germany, Italy, Sweden, Switzerland, United Kingdom</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>New factors (as per the amended regulations)</th>
<th>Previous regulations</th>
<th>Amended regulations</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Pharmacoeconomic value</strong> (only for high-cost medicines)</td>
<td>X</td>
<td>Given the limitations of evaluating if a price is excessive on the basis of unit price, the PMPRB will consider the opportunity cost of a medicine in the health system when evaluation if a price is excessive.</td>
</tr>
<tr>
<td><strong>Market size</strong></td>
<td>X</td>
<td>PMPRB will consider the economic impact from the sales for the medicine when evaluating if a price is excessive.</td>
</tr>
<tr>
<td><strong>GDP and GDP per capita</strong></td>
<td>X</td>
<td>These measure are a proxy of what the entirety of the Canadian population, or the individual consumers can afford to pay for the new patented medicines</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Reporting requirements</th>
<th>Previous regulations</th>
<th>Amended regulations</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Net revenues</strong></td>
<td>Excluding: rebates, discounts, refunds, free goods, free services, gifts or other benefit of a like nature</td>
<td>Excluding: reductions given to any party in the form of free goods, free services, gifts or any other benefit of a like nature (e.g. rebates and discounts provided to third party insurers)</td>
</tr>
<tr>
<td><strong>OTC/ veterinary/ generics</strong></td>
<td>√</td>
<td>Reduced reporting obligations for medicines at the lowest risk of excessive pricing</td>
</tr>
<tr>
<td><strong>Pharmaco-economic info</strong></td>
<td>X</td>
<td>Cost-utility analyses from a publicly funded Canadian organization.</td>
</tr>
<tr>
<td><strong>Market size information</strong></td>
<td>X</td>
<td>Estimated maximum use of the medicine in Canada, based on the prevalence of the approved therapeutic use of the medicine in Canada</td>
</tr>
</tbody>
</table>
Schematic of proposed new Guidelines

**IMLP**
- MIP of available PMPRB111 prices
  *Calculated yearly until MLP set*

**CATEGORY I**
- Above annual cost threshold
- Above estimated market size threshold

**CATEGORY II**
- All patented medicines not in Category I

**MRP**
- Pharmacoeconomic Value (PV) test
- Market size adjustment
- If no PV available, lower of LIP, dTCC or iTCC

**MLP**
- MIP or TCC or LIP but not lower than LIP
  *Calculated once unless reassessed*

IF IMLP < LIST PRICE

IF MRP < ATP OR MLP < LIST PRICE

**INVESTIGATION**

**VCU**

**HEARING**

**CLOSURE**

**Definitions**
- **iMLP** – interim Maximum List Price
- **MLP** – Maximum List Price
- **MRP** – Maximum Rebated Price
- **MIP** – Median International Price
- **LIP** – Lowest International Price
- **dTCC** – domestic Therapeutic Class Comparison
- **iTCC** – international Therapeutic Class Comparison
- **ATP** – Average Transaction Price
Overview of proposed new Guidelines

A risk-based approach to price regulation that considers value and affordability, in addition to list prices in other like-minded countries.

Basic process:

I. Interim Maximum List Price (iMLP) for all medicines at introduction based on Median International Price (MIP) of the PMPRB11

II. Screening of medicines into high-priority (Category I) or low-priority (Category II)

III. Maximum Rebated Price (MRP) for Category I drugs based on new pharmacoeconomic, market size, and GDP factors

IV. Maximum List Price (MLP) is the lower of MIP and the median domestic Therapeutic Class Comparison (“dTCC”) but is subject to a price floor set by the lowest international price (“LIP”)

V. Reassessment

The MLP would be a transparent ceiling based on public list prices, while the MRP (Category I medicines only) would be confidential.

Patentees must ensure that the ‘Net Price’ of a Category 1 medicine in Canada is no higher than the MRP. To comply, patentees would be required to report revenues net of rebates to third-parties.
Canada Gazette Part II: *The Regulations Amending the Patented Medicines Regulations (Additional Factors and Information Reporting Requirements)*

[The Amendments] update the PMPRB’s regulatory framework to a risk-based approach that includes new price regulatory factors and patentee information reporting requirements to protect Canadian consumers from excessive prices.

**12-month treatment cost greater than 50% of GDP per capita:** following the filing of introductory period pricing information, the medicine’s 12-month treatment cost will be calculated by Staff based on the maximum dosage per course of treatment listed in the product monograph; the maximum number of courses of treatment per 12 months, based on the nature of the condition, clinical practices, and other relevant criteria; and the highest Canadian List Price. If a List Price is not available, the national Net Price will be used.

**Estimated or actual market size (revenue) exceeds annual Market Size Threshold:** the annual Market Size Threshold will initially be set at $25 million.\(^{13}\)
Proposed Maximum Rebated Price (MRP) calculation for Category I medicines

Medicines with treatment cost greater than 50% of GDP per capita

- The Incremental Cost-Effectiveness Ratio ("ICER") measured in cost per quality-adjusted life years ("QALYs") for each indication of the patented medicine will be identified from the cost-utility analyses filed by the patentee.
- The ICER will be compared against the applicable pharmacoeconomic value threshold of $60,000 per QALY.
- The price at which the patented medicine’s ICER would be equivalent to the pharmacoeconomic value threshold will be identified as the Pharmacoeconomic Price, or “PEP”.
- In the absence of a PEP, the lower of the (i) Lowest International Price, (ii) the domestic Therapeutic Class Comparison, or the (iii) international Therapeutic Class Comparison will be considered.
- The MRP may be further adjusted for market size if the patented medicine realizes annual quantities such that, if priced at the MRP set by the PEP, revenues would be in excess of $25 million.
- For patented medicines with an estimated total prevalence no greater than 1 in 2,000 across all approved indications, the MRP will be set at 50% above the PEP, but will be further adjusted for market size if the patented medicine realizes annual revenues in excess of $12.5 million.

Medicines with treatment cost lower than 50% of GDP per capita, triggering the Market Size Threshold

- The Maximum Rebated Price will be derived by adjusting the Maximum List Price for market size when revenues exceed $25 million.
A market size adjustment is applied to medicines with quantities sold such that annual revenues would exceed $25 million when priced at the MRP(s) set by the PEP.

Incremental adjustment based on units sold in each tier* over $25 million and this adjustment will be applied annually to determine the MRP.

*These tiers may also be adjusted from time to time, and at least every five years, to reflect changes in CPI and GDP.
Market size adjustment for Category I medicines that treat rare diseases

- For category 1 medicines with an estimated total prevalence no greater than 1 in 2,000 across all approved indications
- The adjusted ceiling prices for the Net Price of these drugs will be higher than those for more common conditions to allow for the even application of the pharmacoeconomic value factor across all Category I patented medicines
- Allow to 50% increase of Pharmacoeconomic Price, as a start and then apply incremental adjustment based on units sold in each tier* over $12.5 million and this adjustment will be applied annually to determine the Maximum Rebated Price

**Market size adjustment for Category I rare disease or disorder patented medicines**

<table>
<thead>
<tr>
<th>Annual revenues</th>
<th>Incremental adjustment factor</th>
<th>MRP</th>
</tr>
</thead>
<tbody>
<tr>
<td>&lt;$12.5M</td>
<td>+50%</td>
<td>1.5 * PEP</td>
</tr>
<tr>
<td>$12.5M-$25M</td>
<td>0%</td>
<td>PEP</td>
</tr>
<tr>
<td>$25M-$50M</td>
<td>-10%</td>
<td>PEP adjusted by applicable factor</td>
</tr>
<tr>
<td>$50M-$75M</td>
<td>-20%</td>
<td>Lower of LIP, dTCC, iTCC</td>
</tr>
<tr>
<td>$75M-$100M</td>
<td>-30%</td>
<td>Lower of LIP, dTCC, iTCC adjusted by applicable factor</td>
</tr>
<tr>
<td>$100M-$125M</td>
<td>-40%</td>
<td></td>
</tr>
<tr>
<td>$125M+</td>
<td>-50%</td>
<td></td>
</tr>
</tbody>
</table>

*These tiers may also be adjusted from time to time, and at least every five years, to reflect changes in CPI and GDP.
How the new Guidelines will work in practice

Case 1: New medicine for chronic disease, large patient population (200,000 in Canada)

**Category 1**
- Annual Treatment cost: $1000 < 50% GDP/capita
- Estimated Revenues $200M > Market size threshold

**MIP:** $2.00

**MLP:** $1.80

**iMLP**
MIP of available PMPRB11 prices $2.00

**MRP:** $1.34
- Pharmacoeconomic Price
- Market size adjustment = $1.34

**Revenues at MLP**
$180M

**Revenues at MRP**
$134M

The MLP is the lowest of the MIP and the dTCC with the LIP as a floor

**Definitions**
- MAPP – Maximum Average Potential Price
- iMLP – interim Maximum List Price
- MLP – Maximum List Price
- MRP – Maximum Rebated Price
- MIP – Median International Price
- LIP – Lowest International Price
- dTCC – domestic Therapeutic Class Comparison
- iTCC – international Therapeutic Class Comparison
- ATP – Average Transaction Price
How the new Guidelines will work in practice

Case 2: New medicine for rare disease, small patient population (2,000 in Canada)

**iMLP**
MIP of available PMPRB11 prices
$1,000

**Category 1**
- Annual Treatment cost: $100,000 > 50% GDP/capita
- Estimated Revenues $200M > Market size threshold

**MRP:** $431
- Pharmacoeconomic Price (50%) = $500
- Market size adjustment = $431

**MLP:** $1,000
MIP = $1,000, LIP = $900, dTCC not available
The MLP is the lowest of the MIP and the dTCC with the LIP as a floor

Revenues at MLP: $200M
Revenues at MRP: $86M

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MAPP – Maximum Average Potential Price  
iMLP – interim Maximum List Price  
MLP – Maximum List Price  
MRP – Maximum Rebated Price  
MIP – Median International Price  
LIP – Lowest International Price  
dTCC – domestic Therapeutic Class Comparison  
iTCC – international Therapeutic Class Comparison  
ATP – Average Transaction Price
63. For non-grandfathered patented medicines, a reassessment may be conducted if any of the following situations arise:

- A patented medicine (Category I or Category II) is approved for a new indication;
- A Category II patented medicine has sales exceeding the Market Size Threshold (see Appendix D), contrary to the initial estimate filed by the patentee; or
- A Category I patented medicine’s total prevalence across all approved indications, as estimated by Staff, increases above 1 in 2,000; or
- A Category I patented medicine’s cost-utility analysis is updated; or

64. A patented medicine receiving a new indication may have its Relevant Indication changed.
Transparent price ceilings – iMLP and MLP

• List prices of all patented medicines that are above the median of the PMPRB11 countries will be reduced

Confidential price ceilings – MRP (new Category 1 medicines only)

• Net Price must be below the price ceiling established by the new factors ($60K/QALY threshold + further price reductions if revenues exceed $25M/year)
• Medicines for rare diseases to be afforded a ceiling price that is 1.5 times the cost-effective price (i.e. price at $60K/QALY)

Enforcement

• Both transparent and confidential ceilings to be enforced starting with January 1, 2021

iMLP – interim Maximum List Price
MLP – Maximum List Price
MRP – Maximum Rebated Price
QALY – Quality Adjusted Life Years
THANK YOU

http://www.pmprb-cepmb.gc.ca/

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