Impact of PMPRB Pricing Changes
Final Research Report

February 3, 2020
Recently, the Canadian federal government passed regulations that change how the Patented Medicine Prices Review Board (PMPRB) will regulate maximum prices for patented medicines for every sale in Canada, which will come into force on July 1, 2020.

The regulatory changes include revisions to the basket of comparator countries (removing the US and Switzerland and adding six jurisdictions with lower-than-Canadian average list prices) and mandating the PMPRB to use new economic factors in its regulatory determinations (cost-per QALY thresholds and price reductions based on market size).

Life Sciences Ontario (LSO) commissioned a research study to better understand the impact of these changes on the pharmaceutical industry and life sciences organizations.

**Three Key Research Objectives**

1. Understand awareness of and reaction to upcoming changes to price controls in Canada among key decision-makers

2. Determine likely response to Canadian price control reforms, including any expected changes in business decisions and investments in Canada

3. Confirm or refute the hypothesis that the new pricing regime will have no negative impacts on access to medicines and investments in Canada
Methodology

STEP 1: Quantitative research

N=46 completes
5-minute online survey with decision-makers
Fielded Nov 19, 2019 to January 17, 2020

STEP 2: Qualitative research

N=10 completes
30-minute follow up in-depth telephone interviews (IDIs)
Fielded January 21 to January 31, 2020

Quantitative Sample Profile

N=36 Senior Pharmaceutical Executives (Presidents, GMs, EVPs, Director level)
• N=27 Canadian affiliate of a global company
• N=6 Parent company based outside Canada
• N=3 Parent company based in Canada

N=10 Life Sciences Executives
• Includes clinical trials, patient support programs, IT for healthcare, non-profits

Qualitative Deep Dive with …

N=6 Large Global pharma companies
N=4 Smaller companies, including Canadian-owned and headquartered
PMPRB changes is the “#1 topic” among senior executives right now

98% of survey respondents said they are familiar with the new PMPRB changes.

83% of pharmaceutical executives said they were “very familiar”

“The single most prominent issue of our time. I have been in the industry for 19 years, there has never been an issue that generated this level of concern. It’s a preoccupation in Canada but also in Global boardrooms.”

Q1. Overall, how familiar are you with the new PMPRB changes? (5-point scale: very familiar to not at all familiar) Base=46
Findings refute the hypothesis that changes will have no negative impacts to business investments in Canada

100% of pharmaceutical executives said PMPRB changes would have a **negative impact** on their overall business plans in Canada

61% of pharmaceutical executives said it will be **significant**!

39%

**Impacts are already felt by both larger Global and smaller Canadian companies**

*We are a small Canadian company; we have already been impacted, putting product extensions on hold because of the uncertainty.*

*Our Global CEO visited Canada and articulated he doesn’t see Canada in the same way. There are trust issues... Now we are seeing delays in decisions for Canada.*

Similar high results for Life Sciences executives with 80% indicating negative impact

Q2. Please indicate the level of impact that the PMPRB changes will have on your plans in Canada? (5-point scale: significant positive impact to significant negative impact) Base=46 “N/A” excluded from the analysis
Executives explain PMPRB changes on business decisions

WHY?
are the impacts expected to be so profound?

"New guidelines want to put us in the middle of international pricing but [PMPRB] doesn’t realize that you can’t have that with the deeper public discounts we already provide and also apply the economic factor – this will put us at the lower end with Poland and Turkey which do not have access to new medicines."

Lower pricing + higher uncertainty = unfavourable market conditions

"It’s January and in 6 short months these guidelines are supposed to come into effect. The economic factor is not known, it’s hard to forecast and leaves us in an ambiguous place. When we consult with government, they don’t have the answers, and it’s leaving us confused."

Insights from Qualitative IDIs with N=10 pharmaceutical executives
Executives explain the need for market certainty

$1M-$2.5M investment requires ROI certainty

At a basic level if you want to launch a new product into the market, with regulation filing, the cost to go through Health Canada and pricing review, etc. it’s $1 million to $2.5 million investment. That’s an investment with 100% certainty of costs. Now it’s hard to predict if the investments will produce revenues because of uncertainty.

“Our ROI is highly uncertain”

WHY? are the impacts expected to be so profound?

Insights from Qualitative IDIs with N=10 pharmaceutical executives
Executives put Canada in context with global decision-making

WHY?
are the impacts expected to be so profound?

“Canada is a small player”

Canada is a reference country in other markets and prices in Canada have an impact elsewhere in the world. Most of these markets are much larger than Canada and innovators will sacrifice the Canadian market to be able to retain value in the other markets.

Canada is 2% of the global market. The US is 50%. We are not going to risk the rest of the world for the sake of Canada.

Insights from Qualitative IDIs with N=10 pharmaceutical executives
Pharmaceutical executives expect impacts across business

### Expected Impact on specific aspects of pharmaceutical business plans in Canada

<table>
<thead>
<tr>
<th>Aspect</th>
<th>Significant Positive Impact</th>
<th>Somewhat Positive Impact</th>
<th>No Change</th>
<th>Somewhat Negative Impact</th>
<th>Significant Negative Impact</th>
</tr>
</thead>
<tbody>
<tr>
<td>Product launches, commercialization and supply of current products to the Canadian market</td>
<td>3%</td>
<td>23%</td>
<td>74%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Compassionate access programs</td>
<td>30%</td>
<td>15%</td>
<td>55%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Clinical Research</td>
<td>9%</td>
<td>47%</td>
<td>44%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Employment</td>
<td>3%</td>
<td>57%</td>
<td>40%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Patient support programs</td>
<td>27%</td>
<td>38%</td>
<td>35%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Manufacturing</td>
<td>63%</td>
<td>14%</td>
<td>23%</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Sorted by “Significant negative impact”

Q2. Please indicate the level of impact that the PMPRB changes will have on your plans in Canada? (5-point scale: significant positive impact to significant negative impact) Base=36 Only pharmaceutical executives asked (not Life Sciences Orgs) “N/A” excluded from the analysis
PMPRB changes expected to have a “cascade effect”

We intended to launch a new medicine in early 2021. Now that it’s clear our price will be dramatically reduced, we suspended our regulatory submission because the original business case and pricing assumptions have been challenged. ... It has a compounding problem, if not launched in a timely way, it will have impacts on staffing, training, hiring support, patient programs, etc.

One pharmaceutical executive explained a “cascade effect” starting with delays around product launches ...

Insights from Qualitative IDIs with N=10 pharmaceutical executives
PMPRB changes will negatively impact product launches

Almost all pharmaceutical executives foresee both delays and no launch decisions

Yes, 94%

1-3 years

typically cited as expected delay

Potentially 1-3 years based on the impact of Canada's price in other country's reference based pricing framework.

No launch

More decisions will be made to not launch at all vs delay because of the potential for broader harm to other larger markets.

Q4. Do you foresee any of the following? “No launch” decisions for medicines in Canada? Delayed launches for medicines in Canada? (Yes/No), Base=36. If yes to delay, by how many months? Base=36
Impact on Canada’s position globally

Pharmaceutical executives explain how PMPRB changes will impact Canada’s global launch position

A lot of companies have tiered launch waves. Canada was always considered a Tier 1 or 2 country, launched either with or just after US, Germany, UK, etc. ...

Now it will be several years later since there will be access challenges before you even get to reimbursement. We will move down to Tier 3 or 4, or even worse, not launched at all.

Insights from Qualitative IDIs with N=10 pharmaceutical executives
Several therapeutic areas are likely to be impacted

Q5. Which of your therapeutic areas in Canada, if any, are likely to be impacted as a result of the new PMPRB changes? Base=36

Rare diseases come immediately to mind ... but it’s really any patient that wants access to great new medicines without waiting years to get them.
Everyday Canadians should care about this issue

It goes to the heart of what we are here to do which is to ensure Canadians can access our medicines. It will significantly affect our ability to launch and launch in a timely way.

It’s a shame that at this time where we now have truly revolutionary products such as potentially curing lung cancer that 5 years ago would have been unthinkable, that it’s at this time the Canadian government is making a stand – right when we are at a tipping point. They see it as a budget issue but now we have personalized medicine and they don’t even want to pay for testing. It’s narrow thinking and it’s wrong.

We are an ethical company. If we have a life saving product, it will be available in some form. But if it’s not acute, not life and death, more chronic then there will be delays or reduction in choices. Only the sickest of the sick will get access. They are forcing us to make decisions we do not want to make.
Many of our out of hospital support programs will be negatively impacted if prices are rolled back or reduced (infusion clinics) which mean closures and increased wait times at hospitals.

Changes will reduce the number of innovative products available in Canada and over time impact Canada's place in the global pharmaceutical industry. This will impact clinical trials groups, opportunities for new graduates and patients.

The proposed changes to pricing of specialty and rare disease drugs can translate to reduced investment in vital and value-added patient support services for patients and will ultimately reduce access to life-saving treatment for these patients. The changes will also impact patients as manufacturers will not be able to offer the same assistance and support to patients through patient support services to patients.
Canada is 2%-2.5% of the world’s pharmaceutical market. It will drop to 1%-1.5%, essentially cut in half because of PMPRB. Launching product in Canada is less attractive.

There will be more layoffs, less investments, and fewer smaller companies going forward.

We are different from bigger companies: we develop products here and have manufacturing and R&D here. If we don’t launch here, the future of our company is at stake.

We employ 250 high paying employees in Quebec alone, 35% are PhDs and 60% Masters, all tax payers. PMPRB threatens them plus another 300-400 suppliers which is 500-600 jobs in the next 3 years in Quebec alone, not to mention the impact on their families.
Final message to the Canadian Government

If you could only communicate one thing to the Canadian government about their intended PMPRB changes, what would it be?

Unless you change these regulations, you will be hurting Canadian patients indefinitely. This harms patients – full stop.

It’s a tragedy of this proposal that these policy proposals will create a great deal of problems for patients and for companies but won’t save money for the government.

Changes are needed but they need to be well-planned. This is not well-planned and there is no time for transition.

Be careful what you ask for and the consequences you get. You worked to make PMPRB relevant. You need to understand the consequences.

A good solution can only be done collaboratively between regulators and those providing the medicines. This is too blunt an instrument and will hurt patients.

Insights from Qualitative IDIs with N=10 pharmaceutical executives
Thank you!

Rachelle Deshaies | rachelle@researchetc.com | 1.416.845.8565
Business realities: Additional verbatim

We estimate a 75% reduction in price for [one] of our medicines.

Through case studies, price reductions would be 40-70% and no impact on jobs or investment. It’s disingenuous to believe this – how can any industry withstand that kind of reduction?

We are small and don’t have the scale of big manufacturers to compete. This is adding another challenge to a challenging industry.

We will need to remove a key revenue generating product, and first line treatment option in its therapeutic class, from the Canadian market as a result of the changes. The new price we will be required to charge is below our cost of goods.

Globally we invest 25% in revenue to R&D. If we take 25% reduction or more in revenue, we have to relook at investments – researchers, vendors, suppliers, employment across the board.

Verbatim from written survey responses from N=36 respondents as well as insights from Qualitative IDIs with N=10 pharmaceutical executives.
No/ Delayed product launch: Additional verbatim

Some products will not be launched at all in Canada. Even upcoming indications of currently approved products may not be launched in Canada.

Due to these pricing changes, Canada will likely be considered later in the launch sequence of countries, if at all.

We are planning to delay the launch of [a new medicine] from 2020 to 2021 and perhaps until 2022. If we cannot get an acceptable price, then we will not launch the product in Canada despite the significant investments made by the company in Canada. Furthermore, our early access program for this medication is not likely to start. Canada is not a favorable launch environment at this point.

We already have major challenges convincing our global headquarters to invest in Canada because it takes very long to get public reimbursement, but now we also have this great uncertainty about prices. I am afraid Canada will lose its place as a preferred country to launch new products - that's bad for us and bad for patients.

We have delayed launch of two significant innovative products due to uncertainty around the regulatory environment and the lack of predictability and stability around establishing a fair price in Canada. With no new products coming to Canada, planned significant expansion has been halted.

Verbatim from written survey responses from N=36 respondents as well as insights from Qualitative IDIs with N=10 pharmaceutical executives
Clinical trials: Additional verbatim

Will not do clinical trials for risk of having to keep patients on therapy in perpetuity without prospects of reimbursement at an acceptable price.

This will also affect the number of clinical trials we will be able to attract to Canada.

Is it ethical to expose patients to clinical studies if the company’s product might not make it here?

These regulatory changes will negatively impact the world-class clinical trial network developed in Canada and will limit our industry's ability to invest in innovative R&D and high value jobs in the life science sector.

We have operations around the world and chose where to conduct clinical trials. We select accommodating environments. Canada is deemed a “bad market”. It’s a mess right now. Same applies to manufacturing.

Verbatim from written survey responses from N=36 respondents as well as insights from Qualitative IDIs with N=10 pharmaceutical executives