



Biogen's Written Submission Regarding the Patented Medicines Price Review Board's Draft Guidelines

Introduction

Since 1998, Biogen has been bringing innovative therapies for the treatment of neurological conditions to Canada. As a biotechnology company that has made groundbreaking advances in the treatment of multiple sclerosis and spinal muscular atrophy, we are a proud contributor to the Canadian innovation ecosystem today and with our pipeline, in the future, so Canadians can continue to benefit from these life-changing therapies.

While we support the federal government's objectives of improving access and sustainability of the healthcare system, Biogen does not believe that the proposed regulations will achieve these healthcare system objectives. We have many concerns that the draft guidelines proposed by the Patented Medicines Price Review Board (PMPRB) will have a significant impact on bringing novel scientific discoveries to Canada. Biogen believes that a collaborative approach is necessary to successfully manage the sustainability and affordability challenges of the healthcare system.

Biogen is of the position that the PMPRB's draft guidelines (in their current form) do not strike a proper balance between managing the affordability of specialty therapeutics and ensuring innovative therapies are still accessible to Canadians who need them. If implemented, these guidelines will pose significant challenges to sustaining and bringing innovative therapies to the market. This includes novel therapies for rare diseases drugs, which have an appreciable amount of risk to develop, given the significant investments required to research less well-known therapeutic areas in small patient populations. It is already a criticism of the Canadian healthcare system that the time to accessing rare disease treatments takes much longer than the United States or Europe. Adding in the complexity and challenges posed by these guidelines will certainly exacerbate time for these life changing treatments being made available to Canadians.

The proposed guidelines further challenge the industry's ability to support the Canadian economy through R&D and clinical trials, sponsorships and donations, job creation, and local investments in patient support programs. Patient support programs often include a variety of services to optimize patient outcomes and provide system efficiencies which include diagnostic and healthcare services, such as lab testing, administration costs, and health care provider time, that the public healthcare system would otherwise have to subsidize. In addition, patient support programs often offset out-of-pocket expenses such as subsidizing travel and other logistical expenses to ensure patients have timely access to the therapies they need.

In fact, in the last five years, Biogen has invested: over \$121 million in R&D; over \$3 million in sponsorships and donations; and over \$42 million in infusion and nursing support in Canada. In addition, Biogen has created approximate 75 jobs per year to support the Canadian economy. The revenue controls from the draft guidelines will impact Biogen's ability to invest in these initiatives, to name just a few.

This written submission highlights Biogen's key areas of concern. Namely:

1. that the proposed use of Pharmacoeconomic Value to set price controls for patented medicines does not follow a sound methodology;
2. that the proposed market size adjusted rebated price penalizes manufacturers from bringing innovative, first-in-class therapies that treat devastating medical conditions to market, or from researching new indications to existing therapies; and
3. that the new reporting requirements put manufacturers at risk of divulging sensitive business information between manufacturers and the ultimate payer or purchaser of patented medicines, which is independent of the PMPRB and its scope.

Pharmacoeconomic Value Assessment

At this time, the Pharmacoeconomic Value factor proposed in the current draft guidelines relies on the use of published incremental cost-utility ratios (ICURs) in order to calculate price reductions for therapies introduced on or after August 21, 2019. The draft guidelines state that the PMPRB will rely on public agencies (i.e., CADTH and/or INESSS) to publish estimates required for the calculation of the Pharmacoeconomic Price, which ultimately informs the Maximum Rebated Price of a patented drug.

The problem with this approach is that public agencies including CADTH often publish the ICUR under a range of estimates rather than as a precise point estimate. In addition, the ICURs estimated by one public agency (e.g., CADTH) can vary significantly in comparison to another (e.g., INESSS), given that several methodological approaches and perspectives (e.g., societal, healthcare system) may be used. The high degree of variability in publicly available information demonstrates the great deal of uncertainty surrounding these estimates, and the inherent parameter uncertainty behind the multiple data inputs and assumptions included in pharmacoeconomic analyses (e.g., the natural history of the disease, which is often less well known among rare diseases). It is for this exact reason of uncertainty and assumptions that sensitivity and scenario analyses are conducted. Given this uncertainty, it would be unreliable to use a single ICUR to calculate the Pharmacoeconomic Price of a patented medicine in order to define its Maximum Rebated Price. The uncertainty is often dealt with, via direct negotiations with the budget holder, who is often the ultimate payer who has greatest accessibility to their own budgets and confidence in addressing the clinical benefit via its own infrastructure (i.e., via outcome-based agreements, or epidemiology-based decisions to inform its willingness to pay) and value.

In fact, the appropriateness of using cost-utility analyses as a whole is questionable, since cost-utility analyses use models or simulations that make assumptions on the course of a disease and treatment effect using clinical trials, rather than the benefits of the drug observed in the real-world. Cost-per-QALY thresholds also discriminate on the basis of age and disability by favouring younger and healthier populations, which have more potential QALYs to gain. In addition, using standard cost-per-QALY measures to evaluate the cost-effectiveness of a rare disease drug is not appropriate because standard pharmacoeconomic models are not designed for small patient populations, which are also typically studied outside of a traditional, randomized controlled clinical trial setting (e.g., open-label, observational studies). As a result, cost-per-QALY estimates for a rare disease drug are more likely to have high margins of error, and would be highly inaccurate, if relied upon, to determine the Pharmacoeconomic Value of a rare disease drug.

Setting an arbitrary and also extremely low threshold value (i.e., \$60,000 per QALY) has little relevance in a society where the allocation of healthcare spending is determined by budgetary funding outside of the PMPRB's jurisdiction, by payers who consider factors beyond the QALY (e.g., societal priorities) when making decisions on drug funding. For example, despite the fact that the majority of CADTH's evaluation of drugs that treat cancer or rare disease drugs find these treatments to be cost-ineffective (with cost-per-QALYs exceeding willingness-to-pay thresholds of \$50,000 to \$60,000), many of these drugs have been negotiated and funded in Canada. Although Biogen acknowledges that the PMPRB's draft guidelines allow for the Pharmacoeconomic Price of Category 1 rare disease drugs (i.e., prevalence no greater than 1 in 2,000 across all approved indications) to be set 50% higher by a Market Size Adjustment Factor if annual revenues sit at up to \$12.5M, this Pharmacoeconomic Price Market Size Adjustment does not make up for a low cost-per-QALY threshold. Rare disease therapies will likely have annual revenues greater than \$12.5M and will therefore be penalized again based on these guidelines. The low Pharmacoeconomic Value Threshold of \$60,000 per QALY, uncertainty of the QALY, and the cost of a rare disease drug will almost always return a low Pharmacoeconomic Price. This is an irrational approach, considering that public expenditure for rare disease drugs in Canada represents less than 2% of drug expenditure, and thus, have a comparatively low budget impact to drugs that treat more common, chronic medical conditions (e.g., diabetes, hypertension).

Because QALYs do not adequately capture the wide variety of benefits that an innovative therapy can achieve, including an individual's ability to remain adherent to therapy, an individual's return to economic

productivity, and the relief of burden on family or caregivers, Biogen continues to have concerns about the use of the QALY in determining the price of a patented drug.

Market Size Adjustment Methodology

The current draft guidelines force the Maximum Rebated Price of a patented drug down as the revenue increases, which is dependent on quantity of units sold as well as the annual or estimated cost of the patented drug. Consequently, manufacturers that sell more units of a particular drug due to higher utilization are penalized for bringing innovative therapies to a larger number of Canadians who are in need. Therapies that treat multiple indications are also penalized. These price controls will make Canada a less attractive market to launch new medicines and disincentivize manufacturers from investing in research to develop new treatments for highly prevalent health conditions that have the greatest impact on the burden of disease. The rigidity of the guidelines does not account for potential indication-based pricing and therefore underscores potential mechanisms that would provide access to a medication across multiple indications where the value is priced according to its clinical benefit in specific patient populations.

Imposing market size adjustments to determine the Maximum Rebated Price of a patented medicine also oversteps the mandate of the PMPRB and creates overlap with existing provincial reimbursement processes such as the pan-Canadian Pharmaceutical Alliance (pCPA) and the federal, provincial, and territorial plans. While Biogen understands that the potential budget impact of a new patented medicine is an important consideration for payers, this is irrelevant to an organization that is not the ultimate payer or purchaser of patented medicines. Through the pCPA negotiations, budgets are scrutinized and capped therefore, the current negotiation processes already address these concerns, to the relevant decision-makers (e.g., CADTH, INESSS, pCPA, provincial/territorial/federal plans).

In addition, implementing a Maximum Rebated Price for greater price controls is beyond the mandate and jurisdiction of the PMPRB. Public list prices should be the only appropriate benchmark in determining excessive prices, since confidential discounts (or rebates) are determined by mutual agreement with the payer or purchaser of the drug (i.e., pCPA, public or private payers, wholesalers), who already evaluate and account for the value and affordability of the drug at negotiation, contract renewal, and renegotiations. As the PMPRB is not the ultimate payer or purchaser of patented medicines, implementing a Maximum Rebated Price goes beyond its purview. Ultimately, Health Canada's rationale for greater price reductions based solely on public list price fails to acknowledge the true cost of innovative therapies in Canada.

Biogen does not believe there needs to be economic justification for a single Maximum List and/or Maximum Rebated Prices to determine prices across all payers (public and private). Different payers have widely different priorities depending on their budgetary constraints, societal and patient needs, and acquisition volumes. Attempting to control what is seen as normal economic behaviours between suppliers and purchasers will distort normal market dynamics and penalize manufacturers for willingly offering benefits to the ultimate payer or purchaser of the patented drug based on the unique priorities of the individual payer or purchaser.

Filing of Confidential Information

Finally, Biogen has concerns with the new filing requirements as they pertain to price reviews. Filing the net prices and all benefits (e.g., rebates, discounts, refunds, free goods) that inform the net price, jeopardizes the sensitive nature of confidential discounts (and rebates) made by mutual agreement with payers or purchasers of the patented drug since the PMPRB could back-calculate, and thus approximate, the benefits (and discounts) negotiated with the payer. Substantial competitive harm to the manufacturer may occur by the introduction of the Pharmacoeconomic Value Assessment and Market Size Adjustment Methodology if competitors are able to approximate these values, provided that the cost-utility analyses are made public by CADTH and/or INESSS.

Biogen encourages the PMPRB to reconsider the required filing of net prices (particularly given that grandfathered products will only be evaluated based on list price) and believes that there may be simpler ways of managing price, while circumventing issues of confidentiality. This includes considering the lower end of the international price spectrum, which is publicly accessible, as opposed to implementing Maximum Rebated Prices based on Pharmacoeconomic Value and Market Size Adjustment Factors, which Biogen believes are inappropriate.

Conclusion

In conclusion, Biogen is of the position that while safeguards need to be (and are already) in place to support sustainability and affordability of the healthcare system, many of the proposed amendments in the current draft guidelines overstep this mandate and are out of PMPRB's jurisdiction. As a proud contributor to the Canadian innovation ecosystem and a significant Canadian investor in neuroscience research, Biogen believes the PMPRB needs to collaborate with industry members to find a middle ground between issues of affordability and accessibility. Biogen is keen to partner with the PMPRB and all relevant stakeholders to achieve pricing reforms that will tackle the sustainability challenges of the healthcare system while improving access to treatments, without the unpredictability and uncertainty that the draft guidelines currently have towards ensuring Canadians have access to innovative therapies.

While Biogen takes the approach that it is advantageous if dollars saved from healthcare system reform can be reinvested into getting newer, higher efficacy therapies to market more quickly, the current draft guidelines will have detrimental implications to the investments that Biogen makes to the Canadian economy, as well as our ability to bring innovative medicines to Canadians with high unmet needs. If Canada becomes a late-tier launch country (a concern that is already problematic considering that rare disease therapies are launched much later than the United States and Europe), investing in local research, will become a challenge.