

BRIEFING PAPER

trade and investment series



CCPA

CANADIAN CENTRE
for POLICY ALTERNATIVES
CENTRE CANADIEN
de POLITIQUES ALTERNATIVES

October 2013

CETA and Pharmaceuticals

Impact of the trade agreement between Europe and Canada
on the costs of patented drugs

By Joel Lexchin and Marc-André Gagnon

Key Findings

On a per capita basis, Canadian drug costs are already the second highest in the world, after the United States. Canada also has one of the fastest rising drug costs per capita among OECD countries. This unwelcome situation is partly due to Canada's industry-friendly intellectual property policies, which include a generous pricing system and broad protection of brand-name pharmaceuticals. The Comprehensive Economic and Trade Agreement (CETA) between the European Union and Canada will further tilt the balance towards the protection of brand-name drug manufacturers and their profits and away from Canadian consumers. Specifically, the agreement will:

- commit Canada to creating a new system of patent term restoration that will delay the entry of generic medicines by up to two years.
- lock in Canada's current terms of data protection, making it difficult or impossible for future governments to reverse them.
- implement a new right of appeal under the patent linkage system that will create further delays for the entry of generics.

CETA will not affect the intellectual property rights regime in the European Union—the changes will only affect Canada. Taken together, these changes

are estimated to increase drug costs to Canadians by between \$850 million and \$1.645 billion annually.

While the Canadian government committed to compensate provinces for the rise in drug costs for their public drug plans, compensation to the provinces simply means that instead of Canadian taxpayers paying the additional costs at the provincial level they will be paying it at the federal level. Importantly, people paying for their drugs out-of-pocket or through private insurance, will be hit twice—through higher drug costs *and* their federal taxes.

Since 2003, Canadian brand-name manufacturers have consistently failed to meet pledges to invest 10% of their sales revenues in R&D that they made in 1987 in exchange for greater market exclusivity. According to the latest data, in 2012 the R&D-to-sales ratio fell to 6.6 percent. While CETA will raise the patented drug bill for Canadians by between 7 percent and 13 percent, this increase will not be offset by additional R&D expenditures. It is thus expected that the R&D-to-sales ratio will decline even more, since CETA will artificially inflate sales due to higher costs without increasing R&D expenditures.

As drug costs continue to grow, there are limited options: restrict the choice of medicines that the provinces can offer to their citizens; place more of the burden of costs on individuals, typically the elderly and the sick; or take money out of other places in the health system, thereby threatening the viability of

Medicare. Canadians should not have to accept any of these choices. The agreement will seriously impact the ability of Canadians to afford quality health care.

Background

At over \$900 per person per year, Canada spends more per capita on pharmaceuticals than any other country in the world except the United States (U.S.).¹ Similarly, measured against other countries in the Organization for Economic Cooperation and Development, growth in drug spending per capita (in real terms) in Canada between 2001 and 2011 was one of the highest.² Canada represented 2.6 percent of the global market sales in 2011, while the United Kingdom, with a population almost twice as large as in Canada, made up only 2.5 percent of the global market.³ In 1998 overall drug spending surpassed spending on physicians as the second largest health care expenditure in the country. Even if we just consider prescription drug spending in 2012, the two were almost even at \$29.96 billion for doctors and \$27.73 billion for drugs.⁴

From 1985 to 2006, drug spending consistently grew faster than overall health spending.¹ There were a number of cost drivers, including population growth and aging, general inflation, price effects (the cost of purchasing an individual drug), volume effects (number and size of prescriptions) and mix effects (changes in the drugs selected to treat a particular condition). Although population growth and aging are often cited as major reasons for spending increases, in fact the second largest contributor, after volume effects, was mix effects, i.e., substituting newer, more expensive drugs for older, less expensive ones.⁶ While using more expensive drugs is justified when they are therapeutically superior, overall fewer than 1 in 10 new drugs offer any significant therapeutic advantages.⁷

Since 2007, the growth in drug spending has slowed and in 2011 and 2012 was 3.8 percent and 3.2 percent, respectively. The trend to slower growth is probably due to a combination of two factors: the expiry of patents on blockbuster drugs with the subsequent entry of lower priced generics, and the move in a number of provinces to lower generic prices.¹ To get an idea of the size of savings that generics afford, consider what happened to Ontario's expenditure on atorvastatin (Lipitor)—a drug used

to treat high cholesterol. In 2009–10, prior to patent expiration, this single product cost Ontario \$316 million.⁸ Once the patent expired and generics were available, that cost dropped in 2010–11 to \$133 million,⁹ for a saving of \$183 million on just one drug. These savings will increase as provinces aggressively lower the price that they pay for generics as Ontario, British Columbia, Alberta and others have done in the past few years.¹⁰

Threats posed by CETA's Intellectual Property Rights provisions

There are three provisions affecting intellectual property rights (IPRs) in the CETA that pose a serious threat to the anticipated savings from generic drugs: patent term restoration, a consolidation of data protection, and a right of appeal under the Notice of Compliance (NOC) regulations.

Patent Term Restoration

Under the terms of the World Trade Organization's Agreement on Trade Related Aspects of Intellectual Property Rights (TRIPS), patents on pharmaceuticals—and all other goods—run for 20 years from the time that the patent application is filed. CETA will now allow for what is called a "patent term restoration" (also called "*sui generis* protection") that can add up to two years onto the length of a patent to account for the time between when the patent is filed and when the drug is eventually marketed.ⁱ It seems that this additional time will be available even if the company/patentee is responsible for the delay.¹¹ According to Rx&D, the association representing the brand-name drug companies, "Canada remains the only developed nation that provides no form of compensation to innovative pharmaceutical companies for regulatory approval delays."¹²

The rationale in support of patent term-restoration is that, without such a change, Canada has an incentive to slow down the approval process. In a report commissioned by the brand-name drug industry, Norton Rose—one of the world's largest legal and consulting firms—justifies patent term restoration by claiming that Canadian drug approval times are 152 days slower than those in the EU (433 versus 281 days). The report claims that slower drug approval means that drugs launched in Canada may have far

less remaining time from the 20-year patent term compared to drugs launched in the EU.¹³ Hollis and Grootendorst find the Norton Rose data problematic in two key elements. “First, while assessment averages 281 days in Europe, the EMA report clearly states that approval takes an additional 79 days beyond the assessment period. The report thus simply used the wrong data. Compounding this error, almost half of the European Medicines Agency (the equivalent of Health Canada) approvals were for ‘generic or hybrid medicines and informed consent applications’ which are obviously very different in nature from the New Drug Submissions in the Canadian data.”¹⁴ In addition, the longer approval time in Canada is the result of four specific drugs where the initial patent submission from the company was deemed non-compliant or deficient and more information was requested. There was a prolonged delay before drug companies finally submitted the required information, artificially inflating the average difference between Canada and the EU. If these four drugs are excluded from the calculations, Canadian approval times for the 18 remaining drugs are on average 67 days less than in Europe.¹⁴

Finally, there is an additional egregious error in Norton Rose. The report only compares approval times for 22 drugs. When a much larger sample is used, it turns out that for drugs approved by the two agencies between 2001 and 2010, the median approval time in Europe was 366 days (interquartile range, 310 to 447) and 393 days (interquartile range, 310 to 603) at Health Canada, for a difference of 27 days instead of 152. When drugs approved by both the European Medicines Agency and Health Canada are compared, that difference drops to just 10 days.¹⁵

Data Protection

The “data” in this term refers to the safety and efficacy information that brand-name companies generate through the clinical trials they conduct in order to get drugs approved. Typically generic companies rely on this data when they submit applications to get products approved. Both the North American Free Trade Agreement (NAFTA) and the TRIPS agreement specify that data should be protected for five years although even that five-year period was subject to interpretation. Article 39.3 in TRIPS only requires countries to protect against “unfair commercial use” of marketing approval data but gives countries

considerable discretion to define “unfair” in the context of their own national laws and culture. “Countries can meet their obligations to protect against “unfair commercial use” under Article 39.3 by barring ‘dishonest’ uses of test data. Countries are not obligated under Article 39.3 to confer exclusive rights on the originator of marketing approval data.”¹⁶

In 2006, Canada extended data protection to eight years of market exclusivity with an extra six months if companies have studied a drug in a pediatric population. Generic companies are not allowed to make use of the brand-name companies’ data in their applications for a minimum of six years.¹⁷ Although CETA will not extend data protection, it will cement the current period in the agreement, making it virtually impossible for any future government to shorten the period.

Moreover, up until now data protection was only granted to new chemical entities, i.e., drugs that have never been sold in any form in Canada. Limited information about the contents of CETA makes it unclear if the range of products available for eight years of data protection will be expanded to include products representing minor change to an existing drug.¹¹ The net effect would be to effectively offer financial incentives for companies to engage in minor molecular manipulations that offer no new therapeutic advances.ⁱⁱ

Right of Appeal

A Notice of Compliance (NOC) is the term Health Canada uses when it certifies that a drug manufacturer has met Health Canada’s regulatory requirements for the safety, efficacy and quality of a product. In 1993, the government introduced the NOC linkage regulations. Under these regulations Health Canada is prevented from issuing an authorization for market entry for a generic until all of the relevant patents on the brand name product had been proven to have expired. As a result, when the generic company submits its application to get a product approved it also sends a Notice of Allegation (NOA) to the patent holder claiming that no patents are being infringed. The patent holder then has 45 days in which to initiate an application in the Federal Court of Canada seeking an order to prohibit Health Canada from issuing a NOC to the generic manufacturer for a period of up to 24

(originally 30) months. At that point, the matter may proceed to a court hearing. The stay expires either at the end of the 24 months, when the patent expires or when the court case is decided, whichever comes first.¹⁸

The argument put forward by the brand-name industry¹⁹ has been that if the generic company wins the court case and is allowed to market its product, then once a NOC has been issued any appeal filed by the patentee becomes moot. As a result of the summary nature of the proceeding, there is no discovery and there may be constraints on obtaining and introducing evidence and cross-examination. The patentee is thus left with no alternative but to start another proceeding (an action for patent infringement) once the generic enters the market. In contrast, according to the brand-name companies, the right of appeal is still available to a generic producer if it loses its initial court case under the summary proceeding.¹⁹ CETA will now allow brand-name companies the right to appeal decisions made under the Patented Medicines (Notice of Compliance) Regulations. However, the generic companies have received written assurances from the Government of Canada that its implementation of the “Right of Appeal” treaty commitment will also address excessive and duplicative litigation by ending the practice of dual litigation. Dual litigation means that even if brand-name companies lose under the NOC linkage regulations, they can launch a separate case under Canada’s general patent law. It is this ability to launch a second court case that the federal government has pledged to end.

Since the EU does not use patent linkage and CETA does not require it to do so, this Right of Appeal provision only applies to Canada. In fact, the European Commission prohibits EU member countries from introducing patent linkage provisions because they delay the entry of generics. Italy was reprimanded in 2012 for trying to introduce such a system and was asked to eliminate it.²⁰ It is ironic that under CETA, rather than Canada eliminating its patent linkage system, it will be forced to strengthen it by providing a right of appeal that will create further delays for the entry of generics. In practice, this means that under CETA there could be a further delay of 6–18 months before generics appear, as the appeal makes its way through the court system.¹¹

Financial Implications of CETA

Although it is impossible to be sure what the final financial implications of CETA will be once its IPR provisions fully come into effect, Grootendorst and Hollis used a sample of 15 drugs to provide an estimate of the consequences. Their assumption, made before the CETA negotiations were completed, was that CETA would delay the entry of generics by 3.46 years on average and that the annual loss for every additional year of entry delay was \$811 million, leading to an additional cost of \$2.8 billion per year.¹¹ Internal documents from the federal government also estimated that the additional costs for patented drugs could be up to \$2 billion, but the methodology used to arrive at this estimate is not known.²¹

The model used by Hollis and Grootendorst included delays due to the right of appeal under NOC regulations, extension of data exclusivity, and implementation of a patent term restoration of a maximum of five years (plus an additional six months when pediatric trials were conducted). We can revise their calculations to adjust them to the actual clauses found in CETA, i.e. right of appeal under NOC regulations and patent term restoration of a maximum two years. If we use the same sample of 15 drugs, and if we assume that data exclusivity is only extended to innovative drugs, we observe that if CETA was fully implemented today, it would increase the average market exclusivity for patented drugs by 383 days, or 1.05 years, which would bring an additional yearly cost of \$850 million, or seven percent of total annual costs for patented drugs.ⁱⁱⁱ If CETA extends data exclusivity to non-innovative drugs, the average delay would increase by 741 days, or 2.03 years, which represents an additional yearly cost of \$1,645 million, or 13% of total costs in patented drugs.

The additional costs cited above assume that CETA’s provisions are applied to drugs currently on the market. As such they are only approximations of what the eventual costs will be, since patent term restoration will only apply to drugs approved after CETA is ratified. Generic equivalents for these drugs will only start to appear around 2023 and the actual additional costs will depend on how many drugs receive the patent term restoration and what their sales are.

The federal government has announced that it will compensate provinces for the rise in drug costs for their public drug plans. If this proves to be the case, then instead of Canadian taxpayers paying the additional costs for prescription drugs at the provincial level they will simply pay at the federal level. Importantly, people paying out of pocket for their drugs, or through private insurance, will not benefit from this compensation. People with no drug coverage and paying out of pocket are usually people with minimum wage jobs and are often the least able to absorb increases in prices. No compensation will be given for either co-payments or deductibles paid out-of-pocket by insured patients covered by a public drug plan.

Brand-Name Industry's Argument for Enhanced IPR Provisions in CETA

Rx&D views the current IPR regime in Canada as “uncompetitive”.¹² “We have to move away from a policy that discourages innovation and encourages copying,” said Russell Williams, CEO of Rx&D.²³ The industry lobby insists that the uncompetitive Canadian environment discourages innovation. They claim that this has led seven major multinational pharmaceutical companies to close research facilities in Canada with a loss of over 1000 jobs between 2010 and 2013.²⁴ To Christopher Viehbacher, the Canadian born CEO of the French multinational Sanofi, the solution is for Canada to offer longer patent protection that is on par with Europe and the U.S.²⁵ The claims that job losses and low R&D investment are due to current Canadian IPRs are unsubstantiated, since countries that are increasingly attracting pharmaceutical R&D expenditures in recent years are emerging countries with much lower level of patent protection.²⁷

When the Federal government increased patent protection for brand-name drugs in 1987, brand-name drug manufacturers pledged to invest at least 10% of their Canadian sales into Canadian R&D expenditures. This is known as the 10% R&D-to-sales ratio. Since 2003, Canadian brand-name manufacturers have consistently failed to meet this requirement. According to the latest data, in 2012 their R&D-to-sales ratio fell to 6.6 percent.³ Instead of penalizing the brand-name drug industry for not respecting its commitment, the clauses about patented drugs in CETA mean that Canada has chosen to further extend market exclusivity for brand-name drugs, without requiring

any commitment in terms of R&D investment from the brand-name pharmaceutical companies.

Rx&D argues that the changes to IPRs in CETA will allow its members to win a greater share of the estimated \$100 billion annual global outlay in life sciences R&D¹² and it promises an investment of more than \$10 billion in Canadian R&D between 2014 and 2022 and then in the two years after that an additional \$2.6 billion.²² These numbers, in fact, represent the status quo as compared to the level of investment in 2010, once a 1.7 percent yearly inflation rate has been discounted. While CETA will increase the bill for patented drugs for Canadians by between 7 percent and 13 percent, this additional cost will not be compensated by additional R&D expenditures. It is thus expected that the R&D-to-sales ratio will decline even more since CETA will artificially inflate sales due to higher costs without increasing R&D expenditures.

Conclusion

Countries within the EU are home to large multinational pharmaceutical companies. In pushing for changes to intellectual property rights in Canada, the EU is trying to strengthen those companies. Yet a better economic outlook for the European-based pharmaceutical industry translates into significantly increased drug costs for Canadians. Any promised benefits to Canada in terms of more R&D are very likely to prove to be illusory, since Canada chose to extend market exclusivity for brand-name drugs without requiring any commitment from drug companies in terms of increased R&D expenditures within the country. As drug costs continue to grow, there are limited options—restrict the choices that the provinces can offer to their citizens; place more of the burden of costs on individuals, typically the elderly and the sick; or take money out of other places in the health system, thereby threatening the viability of Medicare. Canadians should not have to accept any of these choices.

Joel Lexchin received his MD from the University of Toronto in 1977 and for the past 26 years has been an emergency physician at the University Health Network. He is currently a Professor in the School of Health Policy and Management at York University. He has been a consultant on pharmaceutical issues for the province of Ontario, various arms of the Canadian federal government, the

World Health Organization, the government of New Zealand and the Australian National Prescribing Service. He is the author or co-author of over 135 peer-reviewed articles on topics such as physician prescribing behaviour, pharmaceutical patent issues, the drug approval process and prescription drug promotion.

Marc-André Gagnon is Assistant Professor in the School of Public Policy and Administration at Carleton University. He is a researcher with the Pharmaceutical Policy Research Collaboration, and an expert associated with EvidenceNetwork.ca. He holds a PhD in Political Science from York University, and a Masters of Advanced Studies in Economics from École Normale Supérieure Fontenay/St-Cloud and Université Paris-1 Sorbonne. His current research focuses on innovation policy in the Canadian pharmaceutical sector, comparative systems for drug coverage, and corporate influence over medical research and prescribing habits.

The authors would like to thank Scott Sinclair, Bruce Campbell, John Jacobs and Mike McBane for their help and comments, Tim Scarth for layout, Gary Schneider for editing and Kerri-Anne Finn and Simon Tremblay-Pépin for communications.

References

1. Canadian Institute for Health Information. *Drug expenditure in Canada, 1985 to 2012*. Ottawa 2013.
2. OECD health data 2013—frequently requested data. June 2013.
3. Patented Medicine Prices Review Board. *Annual report 2012*. Ottawa 2013.
4. Canadian Institute for Health Information. *National health expenditure trends, 1975 to 2012*. Ottawa 2013.
5. Canadian Institute for Health Information. *Drug expenditure in Canada, 1985 to 2011*. Ottawa 2012.
6. Canadian Institute for Health Information. *Drivers of prescription drug spending in Canada*. Ottawa 2012.
7. Prescrire Editorial Staff. New drugs and indications in 2011: France is better focused on patients' interests after the Mediator scandal, but stagnation elsewhere. *Prescrire International*. 2012;21:106–10.
8. 2009/10 report card for the Ontario Drug Benefit Program. 2011; http://www.health.gov.on.ca/en/public/programs/drugs/publications/opdp/docs/odb_report_09.pdf. Accessed June 29, 2013.
9. 2010/11 report card for the Ontario Drug Benefit Program. 2012; http://www.health.gov.on.ca/en/public/programs/drugs/publications/opdp/docs/odb_report_10.pdf. Accessed June 29, 2013.
10. Canadian Life and Health Insurance Association Inc. *CLHIA report on prescription drug policy: ensuring the accessibility, affordability and sustainability of prescription drugs in Canada*. Toronto: CLHIA;2013.
11. Grootendorst P, Hollis A. "The 2011 Canada-European Union Comprehensive Economic and Trade Agreement: an economic impact assessment of the EU's proposed pharmaceutical intellectual property provisions" *Journal of Generic Medicines*. April 2011; 8: 81–103. The appendix for the calculations can be found in Grootendorst P, Hollis A. *The Canada-European Union Comprehensive Economic & Trade Agreement: an economic impact assessment of proposed pharmaceutical intellectual property provisions*. Toronto 2011.
12. Canada's Research-Based Pharmaceutical Companies. *Reality check: analysis of the CGPA's economic assessment of proposed pharmaceutical IP provisions*. Ottawa 2011.
13. Kierans P, Wall K, Daley J. *CETA trade negotiations 2011—drug market exclusivity in the EU and Canada*. Toronto 2011.
14. Hollis A, Grootendorst P. *Drug market exclusivity in the EU and Canada: problems with Norton Rose's comparative analysis*. Toronto 2012.
15. Downing N, Aminawung J, Shah N, Braunstein J, Krumholz H, Ross J. Regulatory review of novel therapeutics—comparison of three regulatory agencies. *New England Journal of Medicine*. 2012;366:2284–93.
16. Correa C. *Protection of data submitted for the registration of pharmaceuticals: implementing the standards of the TRIPS agreement*. Geneva 2002.
17. Regulations amending the Food and Drug Regulations (Data Protection). *Canada Gazette Part II*. 2006;140:1493–502.
18. Faunce T, Lexchin J. Linkage pharmaceutical evergreening in Canada and Australia. *Australia and New Zealand Health Policy*. 2007;4:8.
19. Pharmaceutical Research and Manufacturers of America. *Special 301 submission 2013*. Washington D.C.: PhRMA;2013.
20. Pharmaceuticals: Commission calls on Italy to comply with EU rules on marketing authorisation of generic drugs. 2012; http://europa.eu/rapid/press-release_IP-12-48_en.htm?locale=en. Accessed July 23, 2013.
21. Canadian Press. Canada-EU drug patent demand in trade talks costs almost \$2B. 2012; <http://www.cbc.ca/news/politics/story/2012/10/15/pol-cp-eu-trade-deal-pharma-costs.html>. Accessed July 23, 2013.
22. Canada's Research-Based Pharmaceutical Companies. *CETA IP changes—impact timeline*. Ottawa 2012.
23. Blackwell T. Trade deal would include increased protection for brand-name drugs. *National Post*. October 25, 2010.

24. Cousineau S. Pfizer to cut 300 Canadian jobs. *Globe and Mail*. October 28, 2012.

25. Cousineau S. Sanofi head sees cure for what ails Canada's pharma sector. *Globe and Mail*. June 16, 2013.

26. European Federation of Pharmaceutical Industries and Associations. *The pharmaceutical industry in figures: key data, 2013*. 2013.

27. Kiriya, N. "Trade and Innovation:Pharmaceuticals", OECD Trade Policy Papers, No. 113,OECD Publishing. Paris, 2011: <http://dx.doi.org/10.1787/5kgdscrcv7jg-en>. Accessed October 25, 2013.

Notes

i. The period of the patent term restoration will be calculated by taking the difference between when the patent application was filed and when the product was marketed and subtracting 5 years. As long as the result is 2 years or less, that additional time will be added to the length of the patent.

ii. New drugs that result from minor changes to existing drugs are generally considered "non-innovative".

iii. According to the 2012 annual report from the Patented Medicine Prices Review Board sales of patented drugs in that year were \$12.8 billion.