

Canada's Drug Price Paradox, 2010

By Brett J. Skinner and Mark Rovere

Main Conclusions

- Based on available data, in currency-equivalent terms, Canadian retail prices for generic prescription drugs in 2008 were 90 percent higher on average than retail prices in the United States for identical drugs
- Of the 64 generic drugs in Canada in 2008 that were compared, 43 were more expensive in Canada, while 21 were more expensive in the United States
- For the generic drugs that were more expensive in Canada, prices were an average of 153 percent higher than in the United States
- For the generic drugs that were less expensive in Canada, prices were an average of 38 percent lower than in the United States
- Relative to the price of the brand-name originator drug, retail prices for generic drugs in Canada were 73 percent of the price of their brand-name equivalents, compared with just 17 percent of the price of their brand-name equivalents in the United States



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Introduction

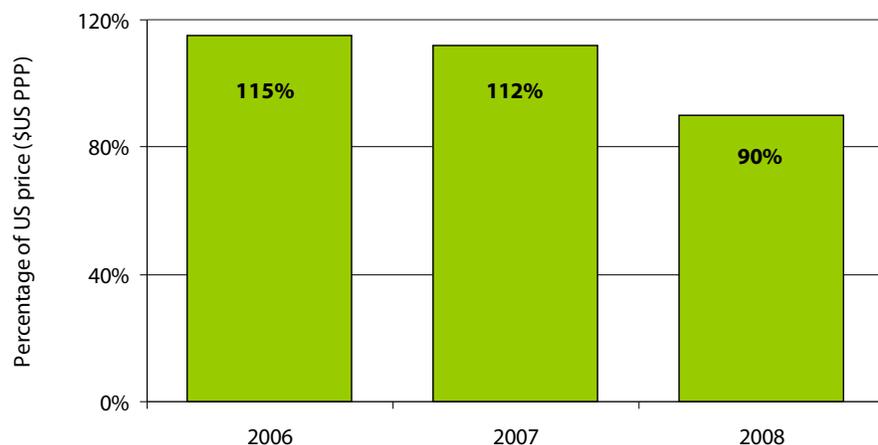
Since 2005, this study has regularly compared Canadian and American retail prices for an identical group of the 100 most commonly prescribed brand-name (mostly patented) drugs and the 100 most commonly prescribed generic drugs in Canada. This year's study focuses exclusively on the price difference between the two countries for the 100 generic drugs that were most commonly prescribed in Canada in 2008. The analysis replicates the same methodology that was used in previous editions (Skinner, 2005; Skinner and Rovere, 2007; Skinner and Rovere, 2008) making the results comparable to those reports.

Using 2008 data, the results show that on average, Canadians prices were significantly higher than American prices for identical

generic drugs. Previous editions of this report have shown that generic drug prices tend to be higher in Canada because various government policies in Canada distort the otherwise normal competitive dynamics of the drug insurance and retail pharmacy market that would spontaneously regulate the prices of generic drugs (Skinner and Rovere, 2008).

In currency-equivalent terms, Canadian retail prices for generic prescription drugs in 2008 were 90 percent higher on average than retail prices in the United States for identical drugs (see figure 1). Previous editions of this study found that generic prescription drug prices in Canada were an average of 112 percent more than in the United States in 2007, and 115 percent more than in the US in 2006 (Skinner and Rovere, 2008).

Figure 1: Differences between prices in Canada and the United States for comparable drugs among the 100 most commonly prescribed generic prescription drugs in Canada, 2006, 2007, and 2008, stated as a percentage of the US price (\$US PPP).



Sources: Skinner and Rovere, 2008; IMS Health Inc. Canada, 2009a; Costco, 2010a.

Findings

Table 1 displays the price differences between Canada and the US for identical generic drugs sold in Canada in 2008.

Of the top 100 most commonly prescribed generic drugs, 27 were not available for comparison because they were not yet marketed in the United States, were not available in generic form in the US, or could not be compared because of different formulations. Nine were sold as “over the counter” (OTC) products in the American market and were therefore not included in this comparison. Sixty-four generic drugs remained available for comparison.

- In a direct comparison between a large sample of retail prices in Canada for all 64 generic drugs that were available in both markets and commonly available prices in the United States, the Canadian price was an average of 90 percent higher than the US price for the same drugs.
- Of the 64 generic drugs that were available for comparison in both markets, 43 (67 percent of the sample) were more expensive in Canada; 21 (33 percent) were less expensive.
- For the generic drugs that were more expensive in Canada, prices were an average of 153 percent higher than in the United States. For the generic drugs that were less expensive in Canada, prices were an average of 38 percent lower than in the United States.

Table 1: Differences between retail prices in Canada and the United States as a percentage of the US price (US\$2008 PPP) over the most commonly prescribed, generic prescription drug products (64 in total) available in both countries in 2008

Generic drug	Price differences	Generic drug	Price differences
Acetaminophen/Codeine	-10%	Levothyroxine	-1%
Alendronate	93%	Lisinopril	81%
Allopurinol	37%	Lithium	-32%
Alprazolam	34%	Lorazepam	-21%
Amitriptyline	46%	Medroxyprogesterone	124%
Amoxicillin	220%	Meloxicam	152%
Atenolol	170%	Metformin	68%
Betamethasone	-65%	Metoprolol	33%
Bisoprolol	-51%	Metronidazole	189%
Bupropion	-5%	Mirtazapine	78%
Carbamazepine	-21%	Mometasone	-40%
Cephalexin	90%	Omeprazole	145%
Ciprofloxacin	253%	Oxazepam	-68%
Citalopram	251%	Oxybutynin	120%
Clarithromycin	363%	Pantoprazole	-71%
Clindamycin	69%	Paroxetine	-22%
Clonazepam	42%	Phenytoin	7%
Cyclobenzaprine	167%	Pravastatin	409%
Diclofenac	17%	Prednisone	-50%
Digoxin	74%	Ramipril	32%
Diltiazem	23%	Ranitidine	285%
Divalproex	-41%	Risperidone	167%
Enalapril	151%	Sertraline	127%
Ergocalciferol	191%	Simvastatin	1390%
Fenofibrate	-52%	Spirolactone	-16%
Fluoxetine	185%	Sulfamethoxazole/Trimethoprim	94%
Fluticasone	-88%	Tamsulosin	-9%
Furosemide	29%	Temazepam	-5%
Gabapentin	104%	Trazodone	224%
Glyburide	-66%	Venlafaxine	-54%
Hydrochlorothiazide	17%	Warfarin	92%
Hydrochlorothiazide/Triamterene	8%	Average	90%
Indapamide	111%		

Sources: IMS Health Inc. Canada, 2009a; Costco, 2010a.

The findings of this study are generally consistent with previous analyses using the same methodology (Skinner and Rovere, 2008). Other research has also shown that prices for generic prescription drugs tend to be higher on average in Canada than in the United States, and are among the highest in the world (Palmer D'Angelo Consulting International (PDCI), 2002; Patented Medicines Price Review Board of Canada (PMPRB), 2002; US Food and Drug Administration, Dept. of Health and Human Services (US FDA), 2003; Skinner, 2005; PMPRB, 2006; Competition Bureau of Canada, 2007; Skinner and Rovere, 2008).

How public policies in Canada cause inflated prices for generic prescription drugs

A variety of federal and provincial public policies have been previously identified as contributing to inflated prices for generic drugs in Canada (Skinner, 2004, 2005). The cumulative effect of these public policies has been to inhibit the downward pressure on the retail prices of generic drug products that would occur under normal market conditions. The most important cause of inflated prices for generic drugs in Canada is the reimbursement policies of publicly funded drugs plans.

Public policies that distort price competition among retailers of generic drugs

- Most public drug programs in Canada direct government

reimbursement of prescriptions to pharmacies instead of consumers.¹ After providing the prescription to the consumer, the pharmacy is subsequently reimbursed by the government for the full cost of the drugs dispensed to those people who are covered under the provincial drug plan. Because governments reimburse pharmacies for the cost of drugs, consumers are not exposed to the cost. This removes incentives for comparative shopping that would put downward pressure on prices.

- Large, established generic companies exploit the direct-to-pharmacy, public reimbursement system to offer rebates to retailers that are “bundled” across many products in exchange for exclusive distribution rights. This frequently results in these companies having a virtual monopoly within retail pharmacy chains for a particular generic label. Because pharmacies are reimbursed directly, discounts are not passed on to consumers.
- In addition, provincial drug programs reimburse pharmacies for generic drugs at a fixed percentage of the price of the original, brand-name drug. Under fixed-percentage reimbursement, there is no competitive incentive for retailers to undercut each other to win sales. The buyer (government) offers every seller the same price. Every pharmacy simply charges the maximum price allowable.

Misguided policy responses of provincial governments

Several provincial governments are implementing various policies in an attempt to reduce generic drug prices. These actions implicitly acknowledge that previous government interventions in the market have caused prices to become unnecessarily inflated. Yet instead of repealing the policies that distort the normal competitive pricing dynamics of the retail pharmacy market, provincial governments have opted to regulate the prices of generic drugs.

As shown earlier, the updated findings of this study indicate that on average generic drug prices in Canada have declined relative to American prices between 2006 and 2008. This is most likely due to a decision to reduce public reimbursement rates for generic drugs covered under the publicly funded Ontario Drug Benefit Plan, a program that accounts for about half of all drug spending in Ontario.

In 2006, the Ontario government passed legislation (Bill 102), which reduced the public reimbursement rate for generic drugs from 70 percent to 50 percent of the price for the brand name equivalent drug.

While Ontario's policy changes likely had some effect on reducing average prices for generics, our results show that Canadian prices have remained stubbornly high relative to American prices for identical drugs. This might explain why on July 1, 2010, the

Ontario government further reduced reimbursement rates to 25 percent of the brand-name original for drugs purchased by the province's public drug program, the Ontario Drug Benefit (ODB) plan. The province plans to go further in 2013 by imposing the new price on private sector sales as well (Ontario, Ministry of Health and Long-Term Care, 2010).

The changes in Ontario have reverberated across the country. Quebec has announced that it plans to regulate generic drug prices to match Ontario's new rules, and will soon also be fixing the price of generic drugs at 25 percent of the brand-name original (CBC, 2010: July 6). Similarly, British Columbia has made an agreement with the Pharmacy Association and the Canadian Association of Chain Drug Stores (CACDS) to lower the prices of generic drugs purchased by the province's PharmaCare program. The agreement will see the cost of generic drugs lowered to 35 percent of equivalent brand-name drugs (down from 65 percent), a move that will be phased in over the next three years (British Columbia, Ministry of Health Services, 2010). The lower drug prices will be available to all British Columbians (i.e., employer or union-paid drug plans, and out-of-pocket payers) as long as the drugs are listed on PharmaCare's drug formulary (British Columbia, Ministry of Health Services, 2010).

Market competition is more effective at regulating prices than government

In contrast to Canada, the drug insurance and retail pharmacy markets in the United States have been subject to a more competitive dynamic. The competition has created economic pressures that have significantly discounted prices for generic drugs relative to their brand-name originator equivalent.

The results from the data used for this study show that on average, Canadian generic drug prices were 73 percent of the price of their brand-name equivalents compared to only 17 percent in the United States. An identical list of drugs was used in both countries for this separate comparison. Only drugs that had pricing data on both the generic and brand-name versions were used (41 in total). Out of 41 drugs that had pricing information on both generic and brand-name versions (in both countries), not a single generic drug in Canada was priced at or below 25 percent of its brand-name equivalent (for common dosage units). In contrast, 29 out of 41 (71 percent) generic drugs in the United States were priced lower than 25 percent of their brand-name equivalents (for common dosage units). In the United States, the cheapest generic drug relative to its brand-name version was Simvastatin, the generic version of which was 1.9 percent of its brand-name equivalent.

Innovative competition in the US retail pharmacy market is driving generic prices down even further. In

September 2006, Wal-Mart stores launched a prescription drug plan that gave customers the opportunity to purchase a 30-day supply of prescription drugs for only \$4, or a 90-day supply for \$10 (Wal-Mart, 2010). The \$4 prescriptions (which are almost entirely generic drugs) cover a 30-day supply for commonly prescribed dosages for over 300 medications. In addition, in 2009 Wal-Mart introduced a free mail delivery program on 90-day drug supplies to customers nationwide. As there is no eligibility criteria for the drug plan, consumers with or without drug insurance can benefit from cheap drug prices. Some individuals may pay even less if they are entitled to additional discounts through alternative prescription drug plans offered through private insurance or Medicaid and Medicare.

Wal-Mart claims that as of March 31, 2010, its prescription drug program had saved consumers and their insurers more than \$3 billion nationwide (Wal-Mart, 2010). By offering discounted generic drugs, Wal-Mart has introduced more price competition among retail pharmacies. When the program was first launched, other nationwide stores, such as Target and K-mart, began offering similar discounts for 30-day or 90-day supplies.

As a result of Wal-Mart's generic drug pricing strategy, several retailers across the United States have had to introduce some form of generic drug plan for their customers in order to compete. Table 2 displays several popular national retail outlets that now offer their own generic drug plan, which illustrates the significant impact that

Table 2: US retail chain pharmacies that offer low-price prescription drugs, ranked among the top 25 US retail chain pharmacies, by prescription share, 2009

Retail chain	Rank among the top 25 retail chain pharmacy companies, by prescription share, 2009	Share of total prescription sales in retail pharmacies, 2009	Program details	States/ exceptions
Walgreens	1	17.6%	\$12.99 generics for a 90-day supply; some \$9.99 for a 30 day supply; includes “over 400” medications	49 states and Puerto Rico; up to 6,148 stores. Member fee required: \$20/year individual; \$35 families for 1 year.
Wal-Mart/ Sam’s Club/ Neighborhood Market	4	5.9%	Includes 358 R _x products; \$4 R _x generics program now in all US pharmacies; \$4 for 30-day supply; \$10 for 90 day supply: Additional drugs including ADHD and family planning treatments sell for \$9	49 states (<i>not</i> ND); some prices higher in 9 states. 3,810 stores.
King Soopers/ City Market/ Kroger Co.	5	3.1%	\$4 generics	Most states. A few prices higher in CO & WY.
Target	6	1.7%	\$4 generics, 30-day supply, 1,200 stores.	47 states (<i>not</i> AK, HI, ND); some prices higher in 10 states.
Publix	12	0.9%	<i>Free</i> (\$0) antibiotics, 14-day supply (began August 2007). All 684 stores with pharmacies	5 states: AL, FL, GA, SC, TN
Costco	13	0.9%	Costco does not have a \$4 generic drug program, however, it does have 416 locations and has an online pharmacy which lists all drug prices	40 US states and Puerto Rico; 416 locations.
Albertson’s	17	0.5%	\$4.99, over 500 generics, 30-day supply; \$10 one-time enrollment fee.	Most states
Meijer	18	0.4%	<i>Free</i> antibiotics, 14-day supply; 176 stores (began October 23	IL, IN, KY, MI, OH
BJ’s Wholesale Club	n/a	n/a	\$4 generics, 30-day supply; 68 stores; no BJ membership required.	9 states: DE, FL, GA, MD, MA, NH, NJ, NY, VA
K-Mart	n/a	n/a	\$15 generics for 90 day supply. Expanded generic drug list = 225 products	Most states

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Retail chain	Rank among the top 25 retail chain pharmacy companies, by prescription share, 2009	Share of total prescription sales in retail pharmacies, 2009	Program details	States/ exceptions
United Drugs	n/a	n/a	Flat-rate prescription pricing “helps this cooperative maintain the ability to compete in the marketplace and provide good service to patients.”	1,026 independent pharmacies in 32 states
Wegmans	n/a	n/a	\$11.99 for 90-day supply	5 states: MD, NJ, NY, PA, VA
TOTAL		31.0%		

Sources: National Conference of State Legislatures, 2010; National Association of Chain Drug Stores, 2010.

Wal-Mart has had on the generic drug market. As table 2 shows, approximately one-third (31 percent) of US prescription drugs sold in 2009 were from retail chain pharmacies that had an in-store discount drug program.

Policy recommendations

The data analyzed in this study show that spontaneous market dynamics are the best mechanism for producing competitively priced generic drugs. Provincial governments should consider the merit of replacing central planning approaches, such as government provision of drug insurance and drug price regulation, with policies that introduce market dynamics that will spontaneously act to

regulate the prices of generic drugs at competitive levels.

Immediate reforms recommended for provincial public drug plans include replacing direct-to-pharmacy reimbursement with direct-to-consumer reimbursement, and requiring insured beneficiaries to pay a flat percentage-based co-insurance payment (e.g., 25 percent of the total cost) when reimbursed by the public plan.

Future recommended reforms include replacing existing provincial public drug programs with a competitive private-sector insurance market in which universal access to high-deductible, catastrophic drug insurance is facilitated through means-tested subsidies. High-risk patients will be centrally pooled across the industry and partially

cross-subsidized by the normal-risk population.

Data and Methods

Canadian data

The Canadian dataset used for this study comprises the 100 most commonly prescribed generic drug products sold in Canada in 2008, as well as their prescription brand-name equivalents. All Canadian data were purchased directly from IMS Health Inc. Canada, using the IMS Health’s CompuScript database. According to IMS Health, the CompuScript database estimates the number of prescriptions dispensed by Canadian retail pharmacies. The CompuScript sample is drawn from a panel of over 5,485 pharmacies, which represents 66 percent of retail pharmacies in

Canada. The sample is stratified by province, type of store (chain or independent), and store size (large or small), and is representative of the total number of stores in Canada. Records are collected electronically each month from participating pharmacies. After passing through various quality control checks, the sample data are projected to the total number of pharmacies in each province and provincial totals are summed to provide a national estimate. The data elements available include “extended units” including pills (for oral solids), millilitres (for liquids), doses (for some inhalers), and grams (for powders). Also available is the cost of the prescription as dispensed. This includes all mark-ups and the pharmacist’s professional fee (IMS Health Inc. Canada, 2009a). The CompuScript data includes all prescription drugs dispensed in pharmacies. This encompasses “non-ethical” drugs, which are over-the-counter (OTC) medicines that can be purchased with or without a prescription by a physician. Although the CompuScript data includes these drugs, for the purpose of this study OTC drugs were excluded when comparing Canadian and American drug prices.

American data

This study used the online pharmacy drug-price information and ordering services of Costco, a major US retail pharmacy chain, to obtain actual US price and other drug information for comparison to the Canadian data purchased from IMS Health. Costco pharmacies are located in 416 retail outlets in 40 US States and Puerto Rico, and have additional online pharmacy services where drugs can be ordered and

shipped directly to members across the United States. National Costco retail prices are uniformly consistent with those listed on the website, which reflect the final full-cash purchase price including pharmacy mark-ups and professional fees (Costco, 2010b). The actual price data from Costco was collected between August 15, 2010 and August 31, 2010 and verified as of August 31, 2010.

Methodology

The data sources used for this study listed drug dosage strengths and prescription sizes that sometimes differed between Canada and the United States for the same drug products. In order to make the data comparable between markets, all drug prices were converted to common dosage units. In almost all cases, this was measured in terms of a price per milligram of active ingredient. By converting to a price-per-dosage unit, prescriptions of various sizes and dosages could be made comparable for each drug product. Canadian sales volumes per formulation and dosage for each drug product were available in the Canadian dataset. Unfortunately, the same level of detail was not available for US price data. Data sources contained many entries for generic drug products as there are multiple manufacturers in the market producing the same active ingredient. Therefore, all generic manufacturers producing the same active ingredient were aggregated into one entry as a common dosage unit weighted by dosage strengths and drug formulations. In order to make prices comparable across currencies, the Canadian prices were converted to US dollars at the 2008

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US-to-Canadian currency Purchasing Power Parity (PPP) rate of 1.23 Canadian dollars to the US dollar, as set by the Organisation for Economic Co-operation and Development (OECD) (OECD, 2010). The

PPP rate is used to reflect a currency's actual purchasing power relative to the same basket of goods in different countries. The PPP rate is a useful measure for consumers who will only shop in their domestic markets because it should accurately reflect their transaction costs (excluding indirect costs) in their own country.

The Canadian dataset is current through the full 2008 year, representing the most recent full year of data available at the time of research. By necessity, actual US retail price data was obtained through primary research and was therefore current to 2010. The difference in years between the Canadian and US datasets required the US data to be adjusted to remove the effect of normal price inflation that occurred between 2008 and August of 2010. According to the US Bureau of Labor Statistics, the annual inflation rate for prescription drugs (from 2008 to August 2010) averaged 7.1 percent (US Bureau of Labor Statistics, 2010). Therefore, observed 2010 US prices were adjusted to remove the 7.1 percent inflation that took place between 2008 and August 2010 in order to make the Canadian and US prices comparable across time periods. Because all prices have been converted to US dollars, Canadian-to-US price differences are stated as a percentage of the US price: e.g., price difference = (CAD\$ - US\$) / US\$.

Note

1 Beneficiaries of most public drug programs pay a small dispensing fee when filling out their prescriptions. However, such fees are not proportional to the full price of the drug and

therefore do not create economic incentives for comparative shopping.

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