

2006 Drug Claims Research

*Help improve your plan designs by
understanding drug utilization and costs.*

**Drug costs increased at a compound
annual rate of 7.6%.**

**5% of claimants were responsible for 40.3%
of total program costs.**

**Generic drugs account for 37.7% of claims
but only 16% of the costs.**

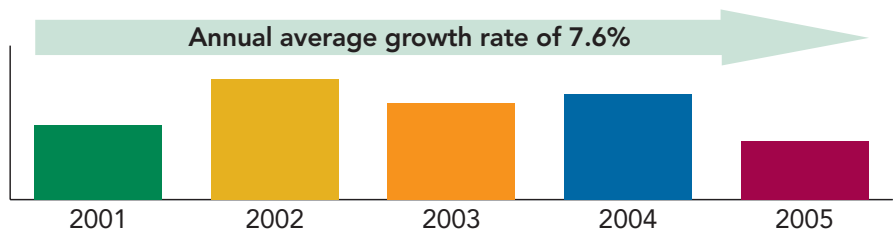
**Formularies ensure the right drug
for the right person at the right time.**

Drug costs increased at a compound annual rate of 7.6%

Drug expenditures reached \$24.8 billion in 2005 and represented 17.5% of total Canadian health expenditures.*

Rising drug plan costs are a result of a large number of inter-related factors. These costs are subject to many influences. The aging population, new drugs, drug price changes, government policies, and medical developments are among some of the factors that affect cost changes.

Green Shield believes that although some of these factors are beyond a plan sponsor's total control, there are ways to manage drug plan costs to minimize the effects of external pressures. Our most recent research is the fifth analysis of drug claims and costs since the original published in 1992. It covers six years of data and is one of the most comprehensive studies in the industry. *(CIHI)



Within Green Shield's plan member population, drug expenditures grew at an average compound annual rate of 7.6%, from 2000 to 2005 (inclusive), for a total increase of 44.4%. This rate of contribution was not consistent from year to year, with a slowing in the annual contribution to growth toward the end of the period.

While it is clear that costs are rising, our data showed that some costs were stabilizing. This is no surprise to Green Shield, but it contradicts what many studies are claiming. So how can we claim that growth rates are slowing? **Simply put, our data reflect the cost management strategies a number of our customers have adopted.** The data from those customers have stabilized costs and shown that over time, it is possible to produce changes in the cost of benefit plans. We believe that with good management practices and long-term planning, employers can achieve a level of control over their benefit plans even when government regulation, medical discoveries and other forces change the environment.

Green Shield's Cost-effective Plan Design Features

- Formulary restrictions e.g. Conditional Drug Formulary™
- Initial Days Supply
- Maximum 100-day supply for maintenance therapy
- Adjudication at price of lowest-cost generic
- Maximum allowed cost in a therapeutic class
- Pharmacist compounded prescription policy
- Maximum allowed drug cost and dispensing fee
- Co-pay and deductible features to suit sponsor's needs
- Co-ordination of Benefits (COB) with other public or private coverage
- Audit of claims

Green Shield’s current cost management strategies include products that:

- minimize waste
- encourage the appropriate use of drugs
- monitor proper administration of plans
- encourage good consumerism (deductibles and co-payment options)
- encourage the greater use of generic drugs
- monitor “first” payer status
- apply caps to fees when appropriate

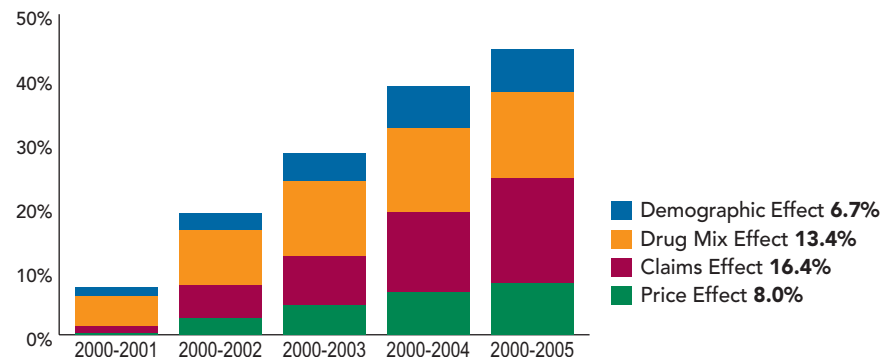
But a study is retrospective and while it can help predict the future, it cannot anticipate every issue. Businesses and governments will continue to feel the pressure of trying to provide effective benefits at appropriate spending levels. The data from this study have provided Green Shield with proof that strategies that manage costs and a long term view of benefit planning can work.

What is driving costs?

Are there manageable costs?

The 44.4% overall increase in drug cost was the result of the cumulative effect of four factors.

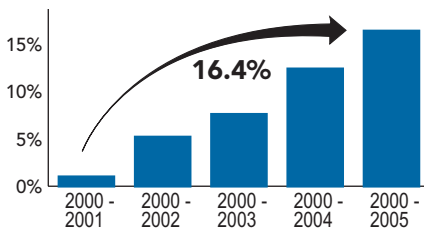
Cost Driver Contribution by Year, Relative to 2000



- A.** The claim effect is the impact of changes in the quantity of drug dispensed per claimant, comprised of claim size (e.g. number of units in a prescription) and the number of claims made.
- B.** The drug mix effect is a function of the changing mix of existing drugs, the introduction of new drugs and the withdrawal of older products.
- C.** The price effect measures change in expenditure resulting from the fluctuations in the unit prices of drugs and the pharmacist’s professional fees as well as the influence of new generics with lower unit prices.
- D.** The demographic effect measures the changes in claimant population composition.

A. Claim Effect

16.4%
increase in costs



Claim Effect Contribution by Year, Relative to 2000

B. Drug Mix Effect

13.4%
increase in costs

Drug Mix Effect Contribution to Cost

Period	2000 - 2005
Entry Drugs	-2.7%
Existing Drugs	14.3%
Exit Drugs	1.8%
Total	13.4%

C. Price Effect

8.0%
increase in costs

Price Effect Contribution to Cost

Period	2000 - 2005
Unit Price Change	9.0%
Generic Substitution	-2.9%
Professional Fees	1.9%
Total	8.0%

The claim effect increased costs by 16.4%. The positive claim effect is comprised of an overall increase in the number of claims per claimant and the more substantial increase in the number of units dispensed for each of those claims. The increase in the number of claims per claimant made up 5.2% of the cost increase and the increase in claim size made up 11.2%. The increase in the number of claims is the result of greater acceptance and availability of effective drug treatments, as well as the use of multiple medications being used to treat a specific disease, such as diabetes. The introduction of the Initial Days Supply feature, applied to all of Green Shield's customers, manages costs through minimizing waste in the form of unused drugs.

The use of drugs is constantly shifting as new drugs are introduced and old ones exit the market. This shifting affects the drug expenditures and has traditionally been the largest cost driver. Changes in the drug mix accounted for 13.4% of the increase in cost between 2000 and 2005.

Three components help explain the dramatic decrease in the influence of the drug mix effect: drug entry, existing drugs and drug exit.

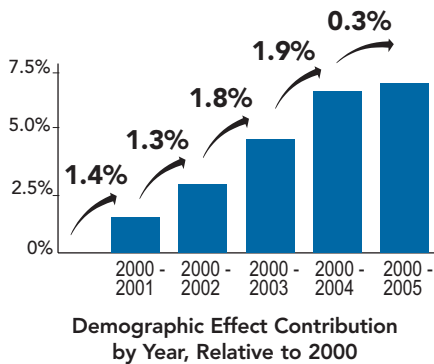
- The **entry** component measures the cost impact resulting from new drugs introduced during the study period. In the 2000 to 2005 period, the introduction of new, less expensive drugs applied downward pressure on costs, resulting in a 2.7% decrease. For those customers who applied the Green Shield Conditional Drug Formulary™, the entry level effect was reduced because a new and more expensive drug is not always added to the formulary if it does not significantly improve upon an existing drug.
- The **existing drug** component reflects the impact of changes in the use of different drugs. Over the entire 2000 to 2005 period, changes in the mix of existing drugs resulted in a 14.3% increase in cost. There was a slowing of the drug mix effect in 2004 and 2005, due in part to the market withdrawal of the arthritis drugs Vioxx® and Bextra® and the tendency to replace them with older, lower-cost alternatives.
- The **drug exit** component produced a positive contribution to cost increase with a 1.8% growth rate from 2000 to 2005, suggesting the replacement of older, less costly drugs, with more costly drugs.

Changing prices accounted for 8.0% of the total drug plan expenditure increase. The price effect is the net effect of price changes for existing drugs, price drops due to newly introduced generics substituted for brands and increasing professional fees.

- **Generic substitution** decreases costs as a result of the lower unit price charged for generic products compared to the price charged for the brand product. The entry of new generics during the period of the study and Green Shield's generic adjudication policy lowered costs by a total of 2.9%. The most notable effect happened in 2004 where highly utilized drugs such as Paxil® and Celexa® became available in generic formulations.
- Analysis of the **unit price** changes compared the year-over-year change in the average price reported for the same drug product (DIN). Overall, this effect added 9.0% to total cost growth.
- The **professional fee** component only added 1.9% to the cost of these drug plans. Contributing to the relatively small increase was Green Shield's ability to manage professional fees without compromising a plan member's contribution.

D. Demographic Effect

6.7%
increase in costs



The contribution of the demographic effect to the change in cost was 6.7%. The aging of the claimant population in the Green Shield data applied upward pressure on costs. This resulted from rapid growth in the number of claimants in the oldest age groups and the fact that these individuals produce more expensive claims on average than the younger age groups. The trend toward more claimants in the oldest two age groups can be expected to continue for the foreseeable future, but with employers focusing on employee wellness and education programs, the trend can be stabilized. Programs such as Green Shield's Benefit Insight™ can help identify wellness issues and help employers focus their efforts on the areas that are most problematic.

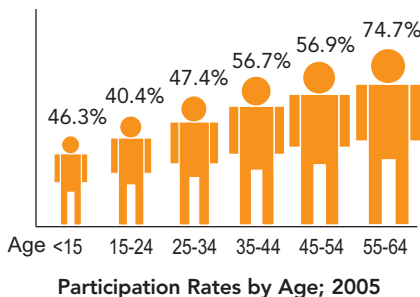
i) Age

The rate of use of drug plan benefits by plan members differs markedly by age. Across all age groups, 55.2% of plan members made a claim in 2005. The rate of usage increases with age.

The average cost per claimant for the 45 to 54-year group was \$802 in 2005 and for the 55 to 64-year group the average was \$1,235. It is expected that a trend toward a higher cost per claimant for older claimants will continue.

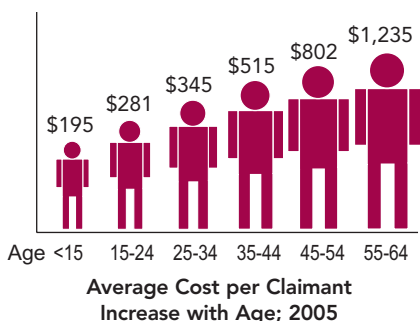
ii) Industry Affiliation

Among industry groups in the Green Shield data, Manufacturing had the highest participation rate at 66.7% (claimants as a % of total employee population).



Participation Rates by Industry; 2005

Educational Services	53.1%
Finance and Insurance	56.2%
Health Care and Social Assistance	56.2%
Other	58.0%
Retail Trade	59.9%
Manufacturing	66.7%



Average Annual Cost per Claimant by Industry; 2005

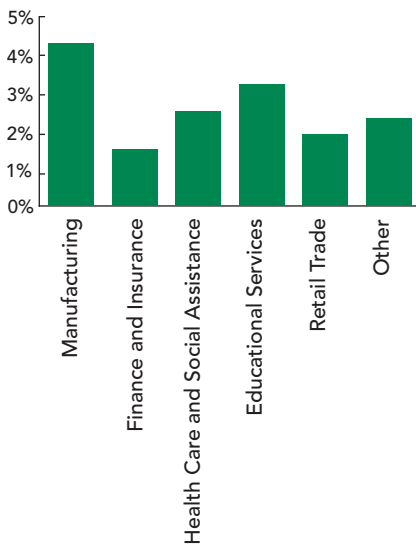
Finance and Insurance	\$456
Retail Trade	\$467
Other	\$531
Health Care and Social Assistance	\$559
Educational Services	\$641
Manufacturing	\$682

There is a strong connection between plan design and industry (e.g. collective agreements). Plan design includes the patient contribution requirements, drugs and drug classes offered as benefits, special requirements for selected drugs, and generic substitution rules among other features.

High Cost Claimants Analysis

5% of claimants were responsible for 40.3% of the total program costs.

High Cost Claimants by Industry



Drug Costs Per Claim Analysis

The annual rate of increase is 5.8% - nearly 3x the increase in CPI of 2.2%.

The fact that a very small proportion of claimants accounts for a large portion of drug program costs has implications for plan design, medical interventions and other programs, which can result in a substantial reduction in overall costs. This analysis demonstrates that efforts to improve health and those programs that assist individuals in avoiding serious illness can prove to be highly cost-effective.

Distribution of Claimants by Cost Concentration



In 2005, the most costly 5% of claimants (top 5%) were responsible for 40.3% of the total program costs and the next most costly group accounted for a further 15.7% of costs. At the other end of the spectrum, the remaining 90% of claimants accounted for 44.0% of total costs. The cost associated with the 5% highest-cost claimants has been increasing faster than for other users: it increased 20% faster on average, from 2000 to 2005, than the rest of the claimant population.

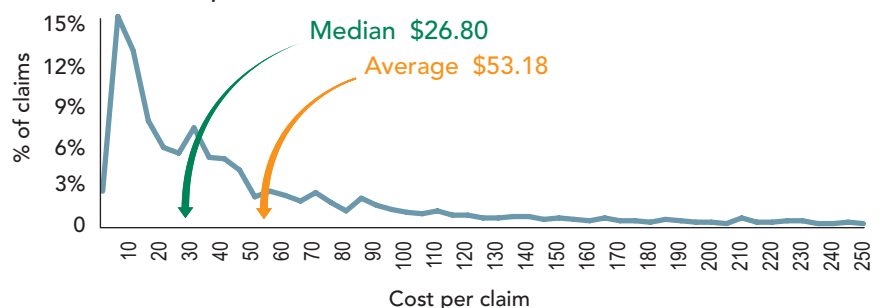
In 2005, the average cost per claimant for those in the top 5% group was 12.8 times higher than the average for all claimants in the rest of the population. High cost claimants had seven times more claims (49 claims versus 7) and on average, each claim was almost double the cost compared to the average for the remaining 95% of the claimant population (\$96 versus \$51).

A higher concentration of high cost claimants (over \$3000/yr in claims within each industry) were in Manufacturing (4.3%) followed by Educational Services (3.2%).

The average drug cost per claim (inclusive of cost and allowed markup but exclusive of pharmacist fee) increased from \$32.48 in 1997 to \$53.18 in 2005. This increase does not reflect utilization. For 2000 to 2005, the annual rate of increase is 5.8%, nearly three times the increase in CPI (2.2%).

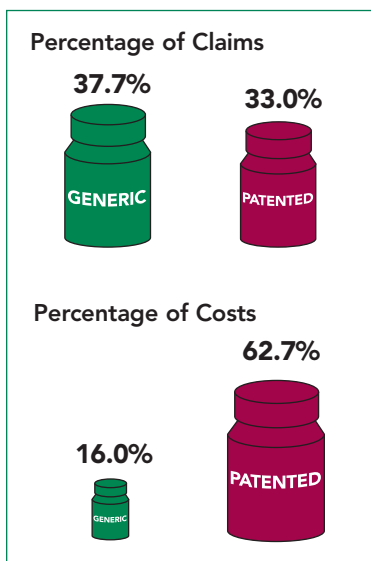
Average cost, however, is affected by a relatively small number of costly claims, raising the average to double the median cost. Median claim costs, which may be a more representative figure, are consistently about half of the average claim costs. Plan design strategies and plan member education help ensure the use of lower-cost drugs where they represent good therapy.

Distribution of Cost per Claim for 2005



Patented, Non-patented and Generic Analysis

Generic drugs account for 37.7% of claims but only 16.0% of the costs.



Formulary Analysis

The right drug for the right person at the right time.

Patented drugs have captured a substantial share of total drug costs. In 1994, they represented only 44% of total cost but by 2005, they represented 61.7% of total costs. Costs for patented drugs were much higher than for non-patented drugs, which included generic drugs. The average patented claim had a 2005 cost of \$101.06 compared to non-patented at \$29.63, 3.4 times as high.

Patented and Non-Patented Drugs – Drug Cost per Claim

Year	Patented	Non-Patented	Ratio
1997	\$65.58	\$21.43	3.1
1998	\$70.91	\$21.60	3.3
1999	\$75.07	\$21.47	3.5
2000	\$79.14	\$22.17	3.6
2001	\$82.90	\$23.49	3.5
2002	\$88.59	\$24.99	3.5
2003	\$91.18	\$26.76	3.4
2004	\$95.67	\$27.88	3.4
2005	\$101.06	\$29.63	3.4
Average Annual Rate of Change	5.6%	4.1%	

Due to their higher costs per claim, patented drug claims, which comprise only 33.0% of claims, account for 62.7% of costs. Generic drugs, on the other hand, account for 37.7% of claims but only 16.0% of costs, due to their lower average claim cost. This illustrates how plan designs that maximize generic usage at the expense of brand products provide significant savings for plan sponsors.

A formulary with restrictions is designed to provide balance between the need for quality therapy and adequate value for money. Green Shield's Conditional Drug Formulary™ is designed to ensure the most efficient and optimal use of new and existing medications. It was initially implemented in 1996. The rates of increase and utilization were smaller for those with a formulary, indicating more careful prescribing habits, closer linking of treatments to clinical guidelines and a resultant decrease in costs.

Formulary Analysis; 2000 - 2005

	With Green Shield's Conditional Formulary™	Without Formulary
Increase in cost per claimant	49.7%	55.9%
Claims per claimant	13.3%	17.5%

These are the highlights from our 2006 Drug Claims Research. The complete study offers more detailed analysis and alternatives in managing costs. It is valuable information that will help you assess your current drug benefit plans and prepare you for the future. Our Green Shield Canada Account Executives are available for further discussion. Contact us today.



As specialists in health and dental benefits programs and administration, Green Shield Canada is committed to exceeding expectations by offering the highest quality of service and can be relied on to be responsive and flexible.

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