



## Health Newsflash

### Top 100 Therapy Classes of 2005



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*In this issue, we present our 2005 edition of ESI Canada's Top 100 Therapeutic Classes report. We hope you will find this report interesting and applicable for your business needs. As in previous years, this report will be divided in two parts. First, we will examine drug trends outside Québec and then secondly, within Québec.*

#### ***Methodology***

This year, the methodology for our analysis has been the same as 2004 in order to provide an accurate picture of drug utilization. In 2004, rankings were sorted by total allowable ingredient cost, which reflects drug pricing, mark-up, and utilization. Using the allowable ingredient cost rather than the net cost (i.e., allowable professional fees plus ingredient costs minus member payment) eliminates the effects of differing plan designs and professional fees on drug utilization.

Ingredient cost and utilization are two key drivers of the overall drug costs to private drug plans. This report also includes rankings by number of prescriptions. The number of prescriptions does not account for varied number of days supply; however, days supply generally remains consistent from year to year. Finally, we also examine the average ingredient cost per prescription and the percentage change in this parameter between 2004 and 2005.

#### ***The Top 100 Therapeutic Classes for Claims outside Québec***

The attached report is grouped by therapeutic classes, a term that represents a category of similar acting drugs used to treat a specific condition. The Top 5 Treated Health Conditions below are grouped by disease state or particular health condition. Each health condition may include several therapeutic classes.

For example, the condition of High Cholesterol consists of five therapy classes:

1. HMG-CoA Reductase Inhibitors (statins)
2. Fibric Acid Derivatives (fibrates)
3. Intestinal Cholesterol Absorption Inhibitors (e.g. Ezetrol)
4. Bile Acid Sequestrants (e.g., Questran)
5. Nicotinic Acid Derivatives (niacins)

#### ***The Top 5 Treated Health Conditions***

The Top 5 treated conditions ranked by total allowable ingredient costs (percent of total allowable ingredient cost) are:

1. High Blood Pressure and Heart Failure (11.69%)
2. High cholesterol (9.79%)
3. Gastrointestinal-ulcers and Reflux Disease (8.46%)
4. Depression (7.14%)
5. Arthritis and Pain (5.47%)

The top 5 treated conditions remain unchanged since 2000, although as we have seen in previous years, the order in ranking has changed. The cost to treat these five conditions accounted for 42.55% of total allowable ingredient costs in 2005 compared to 44.1% in 2004 and 44.6% in 2003. For the first 3 conditions, the percent of total allowable ingredient cost has increased slightly but overall, has remained relatively stable when compared to 2004.

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It is important to note that although depression and arthritis and pain continue to belong to the top 5 treated health conditions, they have actually decreased in percent of total allowable ingredient cost since 2004. Let's look at them more closely!

#### Depression

The introduction of generic of Wellbutrin SR 150mg (bupropion) has contributed to the 17.66% decrease in average ingredient cost per prescription for the antidepressants class, from \$67.40 in 2004 to \$55.49 in 2005. This significant decrease in the Miscellaneous Antidepressants class could also be partly attributed to the transition of Effexor and Effexor XR products into a new therapy class named Serotonin-Norepinephrine Reuptake Inhibitors (SNRIs). As a result, they were not accounted for in this year's Miscellaneous Antidepressants therapy class results.

It is also worthy to note that there has been an 8.93% decrease in average ingredient cost per prescription for the Selective Serotonin Reuptake Inhibitors (SSRIs). Generic versions of Paxil (paroxetine) and Celexa (citalopram) became available during 2004 but continued to impact the market of SSRIs during 2005.

#### Arthritis and Pain

The withdrawal of the COX-2 inhibitor Vioxx in 2004 and the more recent removal of Bextra from the market in 2005 have caused a significant impact on the COX-2 class. Overall, these events have contributed to the 2.04% decrease in total ingredient cost in arthritis and pain medications compared to 2004. Although, there is a decrease in total allowable ingredient cost overall, we have observed an increase of 16.02% in the average ingredient cost per prescription for COX-2 inhibitors. This is in part due to the large decrease in the number of COX-2 inhibitor prescriptions. As well, we find that this increase is also the result of more patients using COX-2 inhibitors for chronic pain, as opposed to acute pain in the past. Thus, the combination of fewer COX-2 prescriptions and more patients claiming for 60 and 90 day supplies, has led to an increase in the average ingredient cost per prescription.

Due to the fallout of COX-2 inhibitors, many patients are now switching to the older anti-inflammatories (NSAIDs), which are often taken with the proton pump inhibitors (PPIs) to guard against stomach irritation. In consequence, we have observed a 0.14% increase in total allowable ingredient cost for the nonsteroidal anti-inflammatory agents (NSAIDs) and a 0.24% increase for the PPIs in 2005. In addition, Arthrotec, which contains a combination of a NSAID with a stomach protective agent (misoprostol), has gone up almost 50% and has jumped in rank from 75 to 55. Narcotic combinations (e.g., Percocet, Percodan, Endocet, Endodan and their generics) were also affected by this change and have switched rankings from 105 to 69 with a 68.65% increase in average ingredient cost per prescription.

#### Highlighted Therapeutic Classes

##### ➤ Intestinal Cholesterol Absorption Inhibitors for High Cholesterol

The utilization of Ezetrol (ezetimibe), an intestinal cholesterol absorption inhibitor, continues to rise since its introduction in May 2003. Ezetrol can be administered alone or in combination with a HMG-CoA reductase inhibitor (statin) for high cholesterol. In 2004, Ezetrol rank jumped from 122 to 73. This year, this product has jumped again from rank 73 to 49 with an increase of 4.51% in average ingredient cost per prescription. The most likely reason for this continuous increase of Ezetrol would be its primary role in combination with a statin in patients unable to achieve or sustain target cholesterol levels. As statins (e.g., Lipitor, Zocor) are highly utilized, we would expect that Ezetrol will also follow this trend.



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- **Miscellaneous Stimulants for Attention Deficit Hyperactivity Disorder (ADHD)**  
The arrival of Concerta in 2004, an extended release formulation of methylphenidate with once daily dosing, continues to contribute to the increasing use of ADHD drugs. In 2005, the average ingredient cost per prescription for stimulants rose by 24.31% with a corresponding jump in rank from 33 to 29. Also, the recent addition of Strattera (atomoxetine HCl) in December 2004, a non-stimulant and non-controlled drug, has also contributed to this increase for ADHD drugs in 2005.
- **Systemic Antipsoriatics for Psoriasis**  
New biologics to treat chronic plaque psoriasis have been approved by Health Canada in recent years. The introduction of Amevive (alefacept) in 2004 and Raptiva (efalizumab) in 2005 has contributed to the 870.30% increase in the average ingredient cost per prescription with a corresponding jump rank from 222 to 64. Their arrival has augmented the average ingredient cost from \$125.24 per prescription in 2004 to \$1,215.19 per prescription in 2005. This substantial increase is mainly due to their high cost, which is considerably higher than topical steroids and oral immunosuppressants.
- **Biologics**  
The use of biologics for the treatment of rheumatoid arthritis (RA), Crohn's disease and multiple sclerosis (MS) continues to grow as more development is being focused in this area. Their high cost and the possibility of having multiple indications for each drug, contributes to their increase in use and overall cost.  
  
The use of Copaxone and Interferons such as Avonex, Rebif and Betaseron for the treatment of MS continues to rise in average ingredient cost per prescription by 13.87% and 1.49%, respectively. Enbrel (etanercept), used primarily for RA, jumped in ranking from 18 to 14 with an increase in average ingredient cost per prescription by 3.93%. In addition Remicade (infliximab), also used for RA and Crohn's disease, changed in ranking from 20 to 19 with an increase of 3.29% in average ingredient cost per prescription. With the arrival of Humira (adalimumab) in September 2004, and Enbrel's new indication for psoriasis in December 2005 and possibly more biologics to follow, the costs attributed to these products will continue to rise!
- **Inhaled Anticholinergics for Chronic Obstructive Pulmonary Disease (COPD)**  
This therapy class continues to rise in ranking from 82 to 67 compared to last year. Spiriva, introduced in 2003, has contributed to an increase in the average ingredient cost per prescription by 36.78% in 2004 and 19.60% in 2005 with a corresponding change from \$60.66 to \$72.55. Spiriva is the only brand drug existing in this therapy class as others have generics available at a lower cost. It is the most expensive drug in this therapy class and it accounts for almost 80% of the total ingredient cost and 50% of the number of prescriptions in this class.
- **Cholinomimetics- ACHE inhibitors**  
Cholinesterase inhibitors (e.g. Aricept, Reminyl, Exelon) are currently the mainstay of treatment for Alzheimer's disease. The number of patients with Alzheimer's will increase as the population ages. This therapy class now belongs to the Top 100 Therapeutic Classes, as it has moved up from ranking 106 in 2004 to 76 in 2005. Although we observed a decrease of 24.86% in average ingredient cost per prescription, probably due to a decrease in average number of pills per prescription, there is still an increase in utilization in this therapy class.



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- **Estrogens and Progestins**  
Estrogens fell in ranking from 57 to 68 and progestins moved down from 66 to 79. Hormone replacement therapy's fall was triggered by warnings against their long-term use. These therapeutic classes will continue to shrink as physicians will probably only prescribe them for short-term use.
- **Bacterial Vaccines**  
Pevnar vaccine indicated for immunization of infants and children from 6 weeks until 9 years of age against pneumonia and otitis media (ear infections) is now covered under provincial plans. Pevnar has been added into most provincially funded programs (Ontario, Manitoba, Saskatchewan, Alberta, Québec, Nunavut and BC) for routine childhood vaccines. As a result, we have observed a decrease of 21.42% in average ingredient cost per prescription in this therapy class.
- **Antifungal Topical**  
The utilization of Penlac (ciclopirox), a topical antifungal treatment for fingernails and toenails, has increased since its introduction in April 2004. Penlac is the only topical treatment available for nail fungal infections. Lamisil (terbinafine), Sporanox (itraconazole) and other anti-fungals have been used orally, but toxicity and drug interactions can be troublesome. Penlac's main advantage is its topical administration. In 2005, Penlac contributed almost 40% to the total allowable ingredient cost in this therapy class. The Antifungal Topical class jumped in ranking from 131 to 99 and increased by 41.87% in the average ingredient cost per prescription during 2005.

#### **Conclusion**

1. The Top 5 treated conditions remain unchanged since 2000.
2. Entries of generic versions of drugs on the market help to maintain and sometimes decrease average ingredient cost per prescription despite high utilization.
3. As the population ages, therapeutic classes like the Cholinesterase Inhibitors for the treatment of Alzheimer's disease and the biologics for RA will continue to increase in utilization.
4. The high cost and multiple indications of the biologics classes contribute to increased utilization and total ingredient cost. The use of biologics will continue to grow as more development is being focused in this area.
5. Arrival of biologics (Amevive and Raptiva) for the treatment of psoriasis contributes to the significant increase in the average ingredient cost per prescription seen in this therapy class.
6. Stimulants (e.g Concerta) and non-stimulants (e.g Strattera) used for ADHD continue to increase in use.

#### **The Top 100 Therapeutic Classes for Québec Claims**

The methodology used in this section is similar to the analysis performed for claims outside of Québec. As Québec does not separate the professional fee and the ingredient cost when submitting their claims to ESI Canada, this analysis has used total allowable claim costs which include the professional fee and ingredient costs rather than allowable ingredient costs alone.

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#### *Optimizing the Value of Drug and Dental Benefits*

#### *The Top 5 Treated Health Conditions in Québec*

The top 5 treated conditions grouped by total percentage of allowable ingredient costs have also remained unchanged in Québec since 2003:

1. High blood pressure and heart failure (12.04%)
2. High cholesterol (10.96%)
3. Gastrointestinal-ulcers and reflux disease (5.45%)
4. Depression (7.71%)
5. Arthritis and pain (4.55%)

The Top 5 health conditions accounted for 40.71% of the cost for all claims within Québec in 2005, compared to 42.00% in 2004 and 42.50% in 2003. The Top 100 therapeutic classes in 2005 represented 86.53% of total claims costs, slightly lower than last year's with 87.20%.

Similar trends are seen with Québec claims as with claims outside of Québec. Generic versions of products for depression have contributed to their decrease in average ingredient cost per claim despite their high utilization. Generic versions of Paxil and Celexa continued to impact the market of the SSRIs this year in Québec with a decrease of 5.83% in average ingredient cost per claim. The introduction of bupropion, the generic version of Wellbutrin, has contributed to the 9.15% decrease in average ingredient cost per prescription and a drop in ranking from 4 to 20.

The withdrawal of Vioxx and Bextra, both COX-2 selective inhibitors, has contributed to the decrease in ranking in this therapeutic class from 8 to 32 in Québec. Their percentage in total ingredient cost has also decreased from 2.32% in 2004 to 0.76% in 2005.

In Québec, the greatest increase in ranking was observed in the Intestinal Cholesterol Absorption Inhibitors, a change from position 112 to 78. The Miscellaneous Stimulants therapeutic class for the treatment of Attention Deficit Hyperactivity Disorder (ADHD) has also jumped from position 33 to 26 with an increase in the average ingredient cost per claim of 25.05%. The use of biologics such as the Tumor Necrosis Factor Alpha Blockers (e.g., Remicade) therapy class has changed in ranking from 34 to 21.

#### *Conclusion*

1. Similar trends appear in Québec as compared to outside of Québec.
2. The top five treated conditions remain unchanged from 2003.
3. The introduction of generic versions of drugs for depression has contributed to the decrease of their total allowable ingredient cost despite their high utilization.
4. The decrease use of COX-2 selective inhibitors class due to withdrawal of Vioxx and Bextra has contributed to the overall decrease in total ingredient cost of the Arthritis and Pain category.
5. The use of Miscellaneous Stimulants for ADHD and biologics continues to increase in Québec.

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