Generics share of prescriptions

Generics now account for 86% of all dispensed retail prescriptions

Source: IMS Health, National Prescription Audit, Jan 2014
Generic products saved the US health system nearly $1.5 trillion over the past 10 years. Cost savings in 2013 alone was $239 billion, representing a 14% increase over cost savings achieved in 2012.

Source: IMS Health, Midas, March 2014
Note: Historic volume is restated due to full data refresh. Volume and associated price are reflected in restatement.
Note: TRICARE data is not included in 2012 and 2013.
Generic pharmaceuticals have saved the US healthcare system* $1.46 Trillion over the past 10 years


<table>
<thead>
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</tr>
</thead>
<tbody>
<tr>
<td>Metabolism</td>
<td>6,965</td>
<td>7,567</td>
<td>9,528</td>
<td>12,831</td>
<td>15,685</td>
<td>19,264</td>
<td>22,862</td>
<td>27,385</td>
<td>28,806</td>
<td>34,225</td>
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<tr>
<td>Anti-Infectives</td>
<td>5,705</td>
<td>7,475</td>
<td>9,355</td>
<td>10,588</td>
<td>12,187</td>
<td>13,554</td>
<td>14,162</td>
<td>16,478</td>
<td>16,697</td>
<td>16,824</td>
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<tr>
<td>Blood Disorders</td>
<td>422</td>
<td>597</td>
<td>737</td>
<td>796</td>
<td>763</td>
<td>801</td>
<td>914</td>
<td>1,057</td>
<td>4,311</td>
<td>6,854</td>
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<tr>
<td>Cancer</td>
<td>1,084</td>
<td>1,504</td>
<td>1,679</td>
<td>1,817</td>
<td>2,276</td>
<td>3,019</td>
<td>4,415</td>
<td>5,175</td>
<td>6,409</td>
<td>8,004</td>
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<tr>
<td>Cardiovascular</td>
<td>18,164</td>
<td>18,534</td>
<td>20,470</td>
<td>28,400</td>
<td>35,249</td>
<td>40,721</td>
<td>44,221</td>
<td>47,755</td>
<td>50,172</td>
<td>58,292</td>
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<tr>
<td>Dermatological</td>
<td>2,505</td>
<td>2,498</td>
<td>2,636</td>
<td>2,683</td>
<td>2,854</td>
<td>4,867</td>
<td>4,091</td>
<td>3,576</td>
<td>3,430</td>
<td>3,448</td>
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<tr>
<td>GU system</td>
<td>3,115</td>
<td>3,083</td>
<td>3,542</td>
<td>4,045</td>
<td>4,243</td>
<td>4,902</td>
<td>6,724</td>
<td>7,824</td>
<td>7,580</td>
<td>8,094</td>
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<tr>
<td>Systemic Hormones</td>
<td>3,999</td>
<td>3,496</td>
<td>2,751</td>
<td>2,215</td>
<td>1,928</td>
<td>1,996</td>
<td>2,149</td>
<td>1,848</td>
<td>1,753</td>
<td>1,630</td>
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<tr>
<td>Musculo-Skeletal</td>
<td>4,113</td>
<td>4,458</td>
<td>5,272</td>
<td>5,732</td>
<td>6,655</td>
<td>7,674</td>
<td>8,204</td>
<td>8,423</td>
<td>8,228</td>
<td>8,956</td>
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<tr>
<td>Nervous System</td>
<td>24,215</td>
<td>27,522</td>
<td>31,196</td>
<td>36,751</td>
<td>41,775</td>
<td>52,424</td>
<td>58,273</td>
<td>65,324</td>
<td>72,470</td>
<td>79,573</td>
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<tr>
<td>Other</td>
<td>21</td>
<td>29</td>
<td>36</td>
<td>45</td>
<td>57</td>
<td>65</td>
<td>76</td>
<td>76</td>
<td>70</td>
<td>82</td>
</tr>
<tr>
<td>Parasitology</td>
<td>7</td>
<td>10</td>
<td>15</td>
<td>19</td>
<td>20</td>
<td>20</td>
<td>17</td>
<td>18</td>
<td>12</td>
<td>12</td>
</tr>
<tr>
<td>Respiratory</td>
<td>2,505</td>
<td>2,729</td>
<td>2,855</td>
<td>3,105</td>
<td>3,842</td>
<td>4,365</td>
<td>3,886</td>
<td>3,590</td>
<td>4,985</td>
<td>8,405</td>
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<tr>
<td>Sensory organs</td>
<td>1,636</td>
<td>2,025</td>
<td>2,147</td>
<td>2,196</td>
<td>2,385</td>
<td>2,593</td>
<td>3,047</td>
<td>3,992</td>
<td>4,486</td>
<td>4,718</td>
</tr>
<tr>
<td><strong>Annual Total</strong></td>
<td>74,455</td>
<td>81,528</td>
<td>92,218</td>
<td>111,225</td>
<td>129,918</td>
<td>156,465</td>
<td>173,040</td>
<td>192,522</td>
<td>209,409</td>
<td>239,116</td>
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<tr>
<td><strong>Total over time</strong></td>
<td>74,455</td>
<td>155,983</td>
<td>248,201</td>
<td>359,426</td>
<td>489,344</td>
<td>645,809</td>
<td>818,849</td>
<td>1,011,371</td>
<td>1,220,780</td>
<td>1,459,897</td>
</tr>
</tbody>
</table>

Note: TA is classified by ATC classification system.
Note: Historic volume is restated due to full data refresh. Volume and associated price are reflected in restatement.
Note: TRICARE data is not included in 2012 and 2013.
*Note: Yearly data is ex-manufacturer. Data has been rounded to nearest million.
Cost savings by therapeutic area
Nervous system and cardiovascular treatments accounted for nearly $140 billion of cost savings in 2013

Generics Cost Savings by TA (2013)

Source: IMS Health, Midas, March 2014
Note: TRICARE data is not included in 2013
Cost savings by therapeutic area

Generic products for nervous system and cardiovascular treatments in the last 10 years account for 58% or $851 billion of cost savings.

**Generics Cost Savings by TA (2004-2013)**

- Nervous System: 33%
- Cardiovascular: 25%
- Respiratory: 3%
- Metabolism: 13%
- Sensory Organs: 2%
- Other: 0%
- Parasitology: 0%
- Blood Disorders: 1%
- Dermatological: 2%
- Anti-Infectives: 8%
- Systemic Hormones: 2%
- GU system: 4%
- Musculo-Skeletal: 5%
- Cancer: 2%
- Other: 0%

Source: IMS Health, Midas, March 2014
Note: Historic volume is restated due to full data refresh. Volume and associated price are reflected in restatement.
Note: TRICARE data is not included in 2012 and 2013.
Cost savings by therapeutic area

Generics Cost Savings, by TA over Time (2004-2013)

Source: IMS Health, Midas, March 2014
Note: Historic volume is restated due to full data refresh. Volume and associated price are reflected in restatement
Note: TRICARE data is not included in 2012 and 2013
Sales from newly genericized products are accumulating rapidly

In 2013, newly generic products saved the US health system $140 billion while older generics cost savings were $98 billion.

**Generics Savings over Time (2004-2013)**

Source: IMS Health, Midas, March 2014
Note: Historic volume is restated due to full data refresh. Volume and associated price are reflected in restatement.
Note: TRICARE data is not included in 2012 and 2013.
Methodology: overall approach

1. Update the 2012 cost savings study with 2013 savings by generating new data for 2004 through 2013. This data included the same existing generics used in earlier versions of the study, their volumes for the study years, and newly introduced generics since the last study. Volumes and price associated with volume for historic periods reflect any restatements made.

For each molecule:

2. Estimate average brand price in last year of patent protection*
   \[\text{Average brand price} = \frac{\text{Total sales of brand molecule}}{\text{Total standard units of brand}}\]

3. For 2013 year brand under generic competition:
   - Estimate value of replaced brand products with generics
     \[\text{Value of replaced brands with generics} = \text{Average brand price} \times \text{Total standard units of generic}\]
   - Estimate cost savings from generics
     \[\text{Estimate cost savings from generics} = \text{Value of replaced brands with generics} - \text{Total sales of generic}\]
   - Sum total cost savings by therapeutic area, and overall

Please note that IMS routinely updates its market audits, sometimes due to categorization changes. This can result in changes to previously reported market sizes for certain products.

*Sales are quoted at ex-manufacturer level
Methodology: molecule segmentation
We computed cost savings for types 2 and 3 only

<table>
<thead>
<tr>
<th>Types</th>
<th>% of Molecules</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Brands without Generic Competition</td>
<td>30%</td>
</tr>
<tr>
<td>2. Loss of Exclusivity: after 2003</td>
<td>13%</td>
</tr>
<tr>
<td>3. Loss of Exclusivity: 2003 and before</td>
<td>7%</td>
</tr>
<tr>
<td>4. No brand volume in the data set</td>
<td>50%</td>
</tr>
<tr>
<td>Total Number</td>
<td>2090</td>
</tr>
</tbody>
</table>

Source: IMS Health, Midas, March 2014
Note: Since analysis was conducted across multiple TAs, some molecules can exist across multiple TAs
Methodology: price estimate

Average brand price was calculated for products that had both generic and brand sales during the 10 year study period.

<table>
<thead>
<tr>
<th>Type</th>
<th>Price Estimate</th>
<th>Savings Calc.</th>
</tr>
</thead>
<tbody>
<tr>
<td>2. Generic launched after 2003</td>
<td>Total brand sales (one year before generic entry)</td>
<td>Cost savings were calculated starting from year of generic entry</td>
</tr>
<tr>
<td></td>
<td>Total brand standard units (one year before generic entry)</td>
<td></td>
</tr>
<tr>
<td>3. Generic launched on or before 2003</td>
<td>Total brand sales (2003)</td>
<td>Cost savings were calculated for all ten years (2004-2013)</td>
</tr>
<tr>
<td></td>
<td>Total brand standard units (2003)</td>
<td></td>
</tr>
</tbody>
</table>

*For patent expirations before 2003, brand price was calculated using data from previous editions of the study.*
Methodology Notes

Data in this report were provided by the IMS Institute for Healthcare Informatics, a division of IMS Health. The analysis updates the fifth edition of the Generic Drugs Savings Study released in December 2013, and shows the cost savings that generic pharmaceuticals provided to the U.S. health care system over the 10-year period of 2004 through 2013. The sixth edition utilizes IMS data on sales and unit volumes of brand and generic products, estimating potential savings at the molecule level. To ensure consistency of the analysis, branded products are defined as originator molecules that no longer are patent protected; generic drugs are those that were introduced after expiry of patent protection on the reference product. The total savings was derived by looking at all 2,090 unique molecules within the IMS MIDAS data, and identifying ones that had both a brand and generic version available during the period 2004 – 2013.

Excluded from the analysis were the 1,672 drug products for which (1) there was no measurable generic competition, either because of an exclusivity or patent still in effect or there were no generic versions of the brand yet approved; or (2) only a generic drug was available for sale because the brand was no longer marketed. This edition’s methodological approach was to perform a full data refresh for the 10-year period of 2004 through 2013, and as such, reflects historic volume changes due to IMS’ routine improvements to its panel design. The average brand price in the last year of patent protection (for expiries prior to 2004) was estimated using the formula [total sales of brand molecule] divided by [total standard units of brand]. For year 2013 brands with generic competition, the estimated value of the replaced brand product was calculated using the formula [average brand price] multiplied by [total standard units of generic]. Finally, the generic cost savings was computed using the formula [value of replaced brands with generics] minus [total sales of generic], with total savings equal to the sum of all cost savings across all therapeutic areas. To obtain the most accurate savings estimate, “standard units” are used throughout the study. The standard unit is the number of units divided by smallest common dose of a product form. Number of units is the number of tablets, capsules, ml or grams sold, times the number of packages multiplied by package size.

Note: IMS routinely updates its market audits, sometimes due to product categorization changes. This edition contains historic volume restatements for the 10-year period of the report due to panel improvements and other changes. As of January 2012, National Sales Perspectives data no longer includes data from a major wholesaler reflecting sales in several channels associated with Tricare, the health care program serving uniformed service members, retirees, and their families, which prohibits wholesalers from reselling data to third parties like IMS Health. Sales restatements have also resulted in a change in the price used for products in the past 10 years. For more information about this study, contact GPhA at 202-249-7100, or visit www.gphaonline.org. This IMS analysis was commissioned by the Generic Pharmaceutical Association; 777 6th Street, NW, Suite 510; Washington, DC 20001.