MedImpact, an independent, trend-focused PBM, held its 2016 overall annual trend to a mere 2.9 percent PMPM. Trend for traditional drugs actually decreased overall, coming in at -0.7 percent. Specialty drug trend was 10 percent in 2016. Specialty products represented only 0.7 percent of claim volume, but accounted for 36 percent of total spend.
Low-Net Cost: A Different Kind of Trend Management

Healthcare continues to be one of the most dynamic industries, and has become a primary focal point in the United States, given the current political landscape. Even as the future direction of healthcare is uncertain, plan sponsors are experiencing numerous market dynamics impacting budgets in the area of pharmacy benefits.

Recent market trends demonstrate rising drug costs stem from a variety of factors, primarily:

- Market entry of high-cost, innovative specialty drugs
- Inflation of drug prices as set by manufacturers

The past three years have brought significant and expensive drugs to market. Market entry of high-cost innovative specialty drugs brings blockbuster drugs, requiring plan sponsors to develop new strategies in response.

The growth of the specialty drug market is reshaping the industry, and has a huge impact to plan sponsor budgets. Half of the top 10 specialty pharmacies by market share are owned by PBMs and plan sponsors, with the top two specialty pharmacies owned by PBMs with a combined market share of nearly 50 percent.

Plan sponsors, PBMs and manufacturers are narrowing the number of dispensing pharmacies for high-cost specialty drugs. Plan sponsors and PBMs that own specialty pharmacies are narrowing access to their owned specialty pharmacies. Manufacturers also provide hubs that control dispensing, or may restrict dispensing to as few as one specialty pharmacy for drugs requiring close management.
Low-Net Cost: A Different Kind of Trend Management

Highly Managed Specialty Drug Utilization: MedImpact is Different

MedImpact provides access to specialty and Limited Distribution Drugs through a unique model using specialty fulfillment pharmacies channeled through One Source, or a single brand, MedImpact Direct®. MedImpact Direct manages high-cost specialty drug dispensing per plan sponsor guidelines via prescription-level utilization management, enforcing formulary and utilization management guidelines among highly managed, select specialty pharmacies.

MedImpact is highly focused on the budget impact of these high-cost drugs. It is more important than ever to understand what drugs are in the clinical pipeline for Food and Drug Administration (FDA) approval, and the potential budget impact those new agents will have on plan sponsors. Beyond knowing what is in the pipeline, plan sponsors must develop strategies in advance of product launch to help ensure budget impact is held to a minimum.

New for 2017, MedImpact is providing quarterly Clinical Pipeline and Budget Impact Modeling Spotlight Service Webinars to assist plan sponsors in developing strategies to help manage utilization once products are launched. MedImpact is also keeping close watch on biosimilars, which have the potential to bring down costs on biologics.

Drug Price Inflation

In other big news for healthcare, headlines over the past year regarding drug prices and their impact to plan sponsors and patients alike have driven much debate over who is at the center of the drug price increases. While manufacturers set drug prices, as a trend-focused PBM, MedImpact’s response is to monitor drug price increases regularly, and implement strategies to help manage client impact of increasing costs.

While innovator drugs have the potential to steal the spotlight, older, established drugs have caused a stir in pharmacy, as drug prices have been inflated by manufacturers as competition in the generic market increases. With the cost of those medications rising rapidly, it’s no surprise many plan sponsors are feeling the financial impact of price increases.

In addition to continually monitoring drug prices, with a strategy focused on low-net cost, we implement contracting strategies to help ensure our clients are protected from drug price inflation as much as possible by driving low-net cost.
Low-Net Cost: A Different Kind of Trend Management

Trends for Brand & Generics: Cost & Utilization

Cost Per 30-Day Supply/Rx Increases Across All Lines of Business

While overall total cost per 30-day supply increased 4.02 percent, the cost for generics went down slightly in the traditional category for Commercial and Medicare lines of business.

On a percentage basis, the highest cost change was evidenced in the specialty generic category, driven largely by the introduction of a generic version of Gleevec (imatinib mesylate) in 2016. While the average cost per 30-day supply increased at the highest rate in our Medicare line of business, overall increase in cost per 30-day supply was held in check at 1.40 percent, driven largely by improvements to generic dispensing rate.

Of the three lines of business reported, our Medicaid line of business saw the highest percentage growth in the specialty category. This was driven primarily by aggressive uptake of generic Gleevec in 2016, which is priced higher than the average specialty generic product, leading to an overall 31.71 percent trend per 30-day supply in the specialty generic category. Medicaid’s specialty brand increase of 19.99 percent was driven largely by patient conversions to newer HIV agents, as well as price inflation in the inflammatory condition and growth hormone categories.

<table>
<thead>
<tr>
<th>Line of Business/Market Segment</th>
<th>Specialty Status</th>
<th>Drug Type</th>
<th>Total Cost per 30-Day Supply</th>
</tr>
</thead>
<tbody>
<tr>
<td>Commercial</td>
<td>Traditional</td>
<td>Generic</td>
<td>-3.21%</td>
</tr>
<tr>
<td></td>
<td>Brand</td>
<td>Brand</td>
<td>11.05%</td>
</tr>
<tr>
<td></td>
<td>Specialty</td>
<td>Generic</td>
<td>15.06%</td>
</tr>
<tr>
<td></td>
<td>Brand</td>
<td>Brand</td>
<td>10.25%</td>
</tr>
<tr>
<td></td>
<td><strong>Commercial Total</strong></td>
<td></td>
<td><strong>7.09%</strong></td>
</tr>
<tr>
<td>Medicaid</td>
<td>Traditional</td>
<td>Generic</td>
<td>2.74%</td>
</tr>
<tr>
<td></td>
<td>Brand</td>
<td>Brand</td>
<td>12.00%</td>
</tr>
<tr>
<td></td>
<td>Specialty</td>
<td>Generic</td>
<td>29.79%</td>
</tr>
<tr>
<td></td>
<td>Brand</td>
<td>Brand</td>
<td>19.99%</td>
</tr>
<tr>
<td></td>
<td><strong>Medicaid Total</strong></td>
<td></td>
<td><strong>7.72%</strong></td>
</tr>
<tr>
<td>Medicare</td>
<td>Traditional</td>
<td>Generic</td>
<td>-2.84%</td>
</tr>
<tr>
<td></td>
<td>Brand</td>
<td>Brand</td>
<td>10.89%</td>
</tr>
<tr>
<td></td>
<td>Specialty</td>
<td>Generic</td>
<td>31.71%</td>
</tr>
<tr>
<td></td>
<td>Brand</td>
<td>Brand</td>
<td>7.85%</td>
</tr>
<tr>
<td></td>
<td><strong>Medicare Total</strong></td>
<td></td>
<td><strong>1.40%</strong></td>
</tr>
<tr>
<td></td>
<td><strong>Overall Total</strong></td>
<td></td>
<td><strong>4.02%</strong></td>
</tr>
</tbody>
</table>

*Total cost per 30-day supply excludes supplies for the administration of medications from measurement, and does not include application of rebates.

Source: MedImpact Book of Business 2016
Low-Net Cost: A Different Kind of Trend Management

Generic Dispensing Rate*

MedImpact had a generic dispensing rate of 88.5 percent overall for 2016, an improvement of nearly 1 percent over 2015.

<table>
<thead>
<tr>
<th></th>
<th>2015</th>
<th>2016</th>
<th>YoY Change</th>
</tr>
</thead>
<tbody>
<tr>
<td>Commercial</td>
<td>86.15%</td>
<td>86.70%</td>
<td>0.55%</td>
</tr>
<tr>
<td>Medicaid</td>
<td>89.86%</td>
<td>90.06%</td>
<td>0.20%</td>
</tr>
<tr>
<td>Medicare</td>
<td>87.31%</td>
<td>88.36%</td>
<td>1.05%</td>
</tr>
<tr>
<td>Overall Book</td>
<td>87.74%</td>
<td>88.50%</td>
<td>0.76%</td>
</tr>
</tbody>
</table>

*Generic Dispensing Rate (Excludes Supplies from Measurement)

Focused Trend Management

Effectively managing drug trend in today’s environment is challenging, but possible. Our 2016 data demonstrates that our products and solutions have proven effective at curbing the increase in drug trend.

Savings with MedImpact

In spite of rising drug prices for established drugs and very high costs for innovator drugs, MedImpact held its 2016 overall annual trend to a mere 2.9 percent PMPM.

Our passion is to provide trend-reduction programs for our clients, balancing cost management with member satisfaction, as evidenced by the value we deliver.

The data in the following pages demonstrates our ability to effectively manage trend and drive to low-net cost in the face of rising drug costs. Our work over the last year has allowed our clients to balance savings with member satisfaction to deliver quality pharmacy benefit services without sacrificing the bottom line.

MedImpact Delivers Value

Clients switching to MedImpact from other PBMs

SAVED

$3.97

per member per month (PMPM)

Clients switching to preferred pharmacy network

SAVED

3.7%

of annual spend

Clients who implemented our High-Cost Generics program

SAVED

$1.42-$3.87

PMPM
Medicare plans experienced the lowest trend across traditional and specialty, for a total of only 2.3 percent increase in 2016 overall. The largest increase among segments was the specialty trend in the commercial segment at 13.9 percent.

### Components of Trend by Line of Business

<table>
<thead>
<tr>
<th>By Line of Business</th>
<th>Overall</th>
<th>Commercial</th>
<th>Medicare Part D</th>
<th>Medicaid</th>
</tr>
</thead>
<tbody>
<tr>
<td>Traditional</td>
<td>-0.7%</td>
<td>-0.7%</td>
<td>-0.4%</td>
<td>5.2%</td>
</tr>
<tr>
<td>Specialty</td>
<td>10.0%</td>
<td>13.9%</td>
<td>9.0%</td>
<td>10.3%</td>
</tr>
<tr>
<td>Total</td>
<td>2.9%</td>
<td>4.4%</td>
<td>2.3%</td>
<td>7.4%</td>
</tr>
</tbody>
</table>

### Overall (Book of Business)

#### Components of Trend

<table>
<thead>
<tr>
<th>Traditional</th>
<th>Utilization</th>
<th>Unit Cost</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>-1.0%</td>
<td>0.2%</td>
<td>-0.7%</td>
<td></td>
</tr>
<tr>
<td>-1.4%</td>
<td>11.6%</td>
<td>10.0%</td>
<td></td>
</tr>
<tr>
<td>-1.1%</td>
<td>4.0%</td>
<td>2.9%</td>
<td></td>
</tr>
</tbody>
</table>

### Medicare

#### Components of Trend

<table>
<thead>
<tr>
<th>Traditional</th>
<th>Utilization</th>
<th>Unit Cost</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.2%</td>
<td>-1.6%</td>
<td>-0.4%</td>
<td></td>
</tr>
<tr>
<td>1.8%</td>
<td>7.0%</td>
<td>9.0%</td>
<td></td>
</tr>
<tr>
<td>1.2%</td>
<td>1.1%</td>
<td>2.3%</td>
<td></td>
</tr>
</tbody>
</table>

### Medicaid

#### Components of Trend

<table>
<thead>
<tr>
<th>Traditional</th>
<th>Utilization</th>
<th>Unit Cost</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>-1.2%</td>
<td>6.5%</td>
<td>5.2%</td>
<td></td>
</tr>
<tr>
<td>-8.7%</td>
<td>20.9%</td>
<td>10.3%</td>
<td></td>
</tr>
<tr>
<td>-1.3%</td>
<td>8.8%</td>
<td>7.4%</td>
<td></td>
</tr>
</tbody>
</table>

Source: MedImpact Book of Business 2016

*All cost analyses are compiled net of rebate and measured on a PMPM basis.*
Drug Price is Driving Trend:
Overall utilization for the top 10 drug classes decreased, while prices increased

Diabetes: Top PMPY for 2016:
Insulins made up 55 percent of total spend within the category

Hepatitis C:
Although utilization and unit cost are both down for Hepatitis C in 2016, it still remains in the top five for PMPY spend with Harvoni leading the spend within the category

Inflammatory disease drove the largest cost increase at 19.5 percent, with HIV, oncology and anticoagulants rounding out the top four at 14.9 percent. While diabetes was not the highest trend driver, the class had the highest per member per year (PMPY) spend at $169.32 PMPY, followed by inflammatory disease and asthma/chronic obstructive pulmonary disorder (COPD).

As would be expected, following the original launch of curative Hepatitis C agents, utilization in 2016 decreased 5 percent over 2015, and cost decreased 1.6 percent, bringing total trend down 6.5 percent for the class.

Did You Know?
Inflation and new product introductions were responsible for driving trend, as utilization was down overall
The Top 10 Therapeutic Classes

Trend Components for Top 10 Therapeutic Classes by PMPY Spend Overall

<table>
<thead>
<tr>
<th>Rank</th>
<th>Therapeutic Class</th>
<th>Utilization</th>
<th>Unit Cost</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Diabetes</td>
<td>2.2%</td>
<td>8.3%</td>
<td>10.7%</td>
</tr>
<tr>
<td>2</td>
<td>Inflammatory disease</td>
<td>-2.5%</td>
<td>19.5%</td>
<td>16.5%</td>
</tr>
<tr>
<td>3</td>
<td>Asthma/COPD</td>
<td>-1.4%</td>
<td>6.2%</td>
<td>4.7%</td>
</tr>
<tr>
<td>4</td>
<td>Oncology</td>
<td>-0.4%</td>
<td>16.7%</td>
<td>16.2%</td>
</tr>
<tr>
<td>5</td>
<td>Hepatitis C</td>
<td>-5.0%</td>
<td>-1.6%</td>
<td>-6.5%</td>
</tr>
<tr>
<td>6</td>
<td>HIV</td>
<td>-9.3%</td>
<td>17.2%</td>
<td>6.3%</td>
</tr>
<tr>
<td>7</td>
<td>Attention disorder</td>
<td>-3.4%</td>
<td>-3.4%</td>
<td>-6.7%</td>
</tr>
<tr>
<td>8</td>
<td>Multiple sclerosis</td>
<td>-5.3%</td>
<td>6.7%</td>
<td>1.0%</td>
</tr>
<tr>
<td>9</td>
<td>High blood pressure</td>
<td>-1.7%</td>
<td>3.1%</td>
<td>1.4%</td>
</tr>
<tr>
<td>10</td>
<td>Anticoagulants</td>
<td>-0.3%</td>
<td>15.2%</td>
<td>14.9%</td>
</tr>
<tr>
<td></td>
<td>Other therapeutic classes</td>
<td>-0.8%</td>
<td>-1.7%</td>
<td>-2.6%</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Rank</th>
<th>Therapeutic Class</th>
<th>2016 Rank</th>
<th>2015 Rank</th>
<th>Therapeutic Class</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Diabetes</td>
<td>1</td>
<td>1</td>
<td>Diabetes</td>
</tr>
<tr>
<td>2</td>
<td>Inflammatory disease</td>
<td>2</td>
<td>2</td>
<td>Inflammatory disease</td>
</tr>
<tr>
<td>3</td>
<td>Asthma/COPD</td>
<td>3</td>
<td>3</td>
<td>Asthma/COPD</td>
</tr>
<tr>
<td>4</td>
<td>Oncology</td>
<td>4</td>
<td>5</td>
<td>Oncology</td>
</tr>
<tr>
<td>5</td>
<td>Hepatitis C</td>
<td>5</td>
<td>4</td>
<td>Hepatitis C</td>
</tr>
<tr>
<td>6</td>
<td>HIV</td>
<td>6</td>
<td>6</td>
<td>HIV</td>
</tr>
<tr>
<td>7</td>
<td>Attention disorder</td>
<td>7</td>
<td>7</td>
<td>Attention disorder</td>
</tr>
<tr>
<td>8</td>
<td>Multiple sclerosis</td>
<td>8</td>
<td>8</td>
<td>Multiple sclerosis</td>
</tr>
<tr>
<td>9</td>
<td>High blood pressure</td>
<td>9</td>
<td>9</td>
<td>High blood pressure</td>
</tr>
<tr>
<td>10</td>
<td>Anticoagulants</td>
<td>10</td>
<td>12</td>
<td>Anticoagulants</td>
</tr>
</tbody>
</table>

There were three category changes in the top 10 from 2015 to 2016. Oncology moved from number five in 2015 to number four, as utilization for Hepatitis C slowed, bringing it to number five in 2016. Anticoagulants moved up from number 12 in 2015 to number 10 in 2016.

Source: MedImpact Book of Business 2016
**Diabetes**

Top five brand drugs within each class by % PMPY spend

- **PMPY Spend**: $169.32
- **Utilization**: 2.2%
- **Unit Cost**: 8.3%
- **Total Trend**: 10.7%

**Market Perspectives**

**Price Inflation and Rising Utilization**

Diabetes affects nearly 9 percent of the U.S. population, and although incidence seems to be decreasing, prevalence remains steady.

Of the top 10 traditional brands, diabetes drugs accounted for 40 percent of the list. Although insulin still dominates the class in PMPY spend, Januvia, a DPP4 inhibitor, accounted for 9 percent of brand spend in diabetes.

Insulin unit-cost increase was 5.3 percent in 2016, and made up 55 percent of PMPY spend in diabetes.

Insulin utilization increased slightly at 0.2 percent overall, with double-digit increases in the specific therapeutic classes, SGLT2 inhibitors and GLP-1 agonist.

**Forecast for Diabetes**

In December 2016, Basaglar (insulin glargine) was approved. We anticipate this having an impact on the diabetes market in 2017. There is potential for trend to decrease in 2017 if price inflation is held or decreased due to competition. MedImpact is tracking the FDA’s anticipated decision on Merck’s follow-on to Lantus in June. If it is approved, this will increase competition in the market for diabetes drugs. This could potentially create a better environment for rebate negotiations, leading to lower cost in this category.

Utilization of DPP4 inhibitors in diabetes is far greater than other branded agents, outside of insulin, and is expected to maintain this level of utilization. Expect to see more utilization for SGLT2 inhibitors and GLP-1 agonists due to clinical data showing benefits in morbidity and mortality. These new drugs could significantly increase costs in this therapeutic class.
It is no surprise that in 2016, Humira and Enbrel accounted for 68.6 percent of PMPY spend for inflammatory diseases. The third branded agent in inflammatory disease, Stelara, accounted for 5.25 percent of PMPY spend in 2016. One oral agent, Otezla, was the fourth branded agent and accounted for 2.8 percent of PMPY spend.

Forecast for Inflammatory Disease
The promise of biosimilars
Biosimilars are biologic products that are similar to their reference product, but not guaranteed to be identical. In 2016, the FDA approved Erelizi, a biosimilar to Enbrel, and Amjevita, a biosimilar to Humira, but neither are currently available on the market. These biosimilars are currently tied up in patent litigation, and will be delayed until 2018 or longer, as indicated by the respective manufacturers.

Psoriasis and Rheumatoid Arthritis
In 2017, more agents are expected to be introduced to the market for Plaque Psoriasis and Rheumatoid Arthritis to compete with current branded agents. Additional JAK inhibitors and biologics targeting IL-23, IL-17 and IL-6 are currently under review for approval at the FDA.
Top Therapeutic Class Detail

Oncology

<table>
<thead>
<tr>
<th>PMPY Spend</th>
<th>Utilization</th>
<th>Unit Cost</th>
<th>Total Trend</th>
</tr>
</thead>
<tbody>
<tr>
<td>$79.49</td>
<td>-0.5%</td>
<td>16.7%</td>
<td>16.2%</td>
</tr>
</tbody>
</table>

Top five brand drugs within each class by % PMPY spend

- **Zytiga®** (abiraterone acetate)
- **Gleevec®** (imatinib)
- **Ibrance™** (palbociclib)
- **Imbruvica®** (ibrutinib)
- **Revlimid®** (lenalidomide)

In 2016, the majority of research activity in oncology was on the medical side with immunologic therapies like the PD-1 antibodies, Keytruda and Opdivo. In 2016, Revlimid accounted for 18 percent of the total PMPY spend on the pharmacy benefit. Although Ibrance only accounted for 7.5 percent of total PMPY spend, utilization increased 171.3 percent in 2016. Imbruvica accounted for 7.2 percent of spend and Gleevec accounted for 6.2 percent.

Forecast for Oncology

In 2016, Gleevec went generic, and will drop out of the top-branded agents’ spend category in 2017 for oncology. There is no foreseeable competition for Revlimid in 2017, so it will likely continue to be the top-branded agent for PMPY spend in oncology. An agent similar to Ibrance is currently under review at the FDA, and could provide some competition, although indication would be slightly more limited. An agent similar to Imbruvica, but touted to have less side effects, may be reviewed by the FDA some time in 2017 or 2018.

New treatments known as CAR (chimeric antigen receptors) T-cell therapy may be introduced into the market in 2017, which hold the promise as a potential cure in select cancers. These agents will be on the medical benefit, and the price tag will undoubtedly be high, with companies quoting benchmark prices of $300,000 to $900,000 for a single, one-time infusion. See more detail in the Market Watch At-A-Glance section on page 19.
Hepatitis C

Top Therapeutic Class Detail

Hepatitis C

<table>
<thead>
<tr>
<th>PMPY Spend</th>
<th>Utilization</th>
<th>Unit Cost</th>
<th>Total Trend</th>
</tr>
</thead>
<tbody>
<tr>
<td>$67.13</td>
<td>-5.0%</td>
<td>-1.6%</td>
<td>-6.5%</td>
</tr>
</tbody>
</table>

Top five brand drugs within each class by % PMPY spend

- Daklinza™ (daclatasvir)
- Zepatier™ (elbasvir/grazoprevir)
- Epclusa® (sofosbuvir/velpatasvir)
- Sovaldi™ (sofosbuvir)
- Harvoni® (ledipasvir/sofosbuvir)

Market Perspectives

Although utilization and unit cost are both down for Hepatitis C in 2016, it still remains in the top five for PMPY spend with Harvoni leading the spend within the category.

Decreasing Utilization

Following the initial uptake of curative, blockbuster drugs, as anticipated, there was a decrease in overall utilization of Hepatitis C agents. By the end of 2016, the PMPM spend fell by nearly 50 percent of its peak within the two-year span.

Forecast for Hepatitis C

MedImpact anticipates that utilization will continue to drop as more patients are cured. However, new treatments will address patients who have failed previous treatments, which could affect utilization and cost in this category.

Hepatitis C: Total Cost PMPM, Last 24 Months

Source: MedImpact Book of Business 2016

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State and federal requirements for coverage of HIV medications can make utilization management challenging. In 2016, Truvada accounted for 16.5 percent of PMPY spend in HIV, and is currently the only regimen approved for pre-exposure propylaxis (PrEP). PrEP is a way for people who do not have HIV, but are at substantial risk of getting it, to prevent HIV infection by taking a pill every day.

One tenofovir alafenamide (TAF) based product, Genvoya, accounted for 7.3 percent of PMPY spend.

Forecast for HIV

In 2015 and 2016, several products were introduced to the market that effectively replaced older branded products that contained tenofovir disoproxil fumarate (TDF) with new branded products that contain tenofovir alafenamide (TAF). These TAF based products are believed to have an improved safety profile. We anticipate that the use of these TAF-based products will eventually overtake the use of the TDF products. Descovy is the TAF-based regimen that is similar to Truvada, but is not indicated for PrEP.
Multiple Sclerosis

Top Therapeutic Class Detail

**Top five brand drugs within each class by % PMPY spend**

- **PMPY Spend**: $51.84
- **Utilization**: -5.3%
- **Unit Cost**: 6.7%
- **Total Trend**: 1.0%

**Market Perspectives**

Although competition to Copaxone 20mg was introduced in June of 2015, the manufacturer was able to maintain market share of their marquee product by converting patients to Copaxone 40mg that was dosed less frequently and priced at parity. Overall, utilization decreased in the Multiple Sclerosis class, particularly with the use of interferons in 2016 compared to 2015.ii

**Forecast for Multiple Sclerosis**

A generic competitor for Copaxone 40mg is currently under review by the FDA, and could potentially impact trend in the Multiple Sclerosis market in 2017 to 2018. The market anticipates that the FDA will approve a new treatment for Primary Progressive Multiple Sclerosis, which currently has no approved treatments. This new intravenous agent would most likely be approved through the medical benefit.

Source: MedImpact Book of Business 2016
From 2015 to 2016 Lantus SoloStar, Advair Diskus, Lantus, and Januvia have all remained in the top four positions by PMPY spend, with diabetes accounting for three of the top four. Lantus and Advair Diskus switched places in the top three, and Januvia moved from fifth position to fourth. Lyrica jumped from number seven to the top five. Eliquis made an appearance in the top 10 for 2016.

The biggest change on the list was the drop for Crestor from fourth position to number 10. Crestor went generic in 2016, and will likely drop off the list in 2017. The market anticipates that a generic version of Advair will be approved in 2017. Depending on when the generic is available to the market in 2017, Advair will likely fall to a lower rank or completely off the list next year as well. With the potential of multiple competitors to Lantus becoming available in 2017, we could see movement in terms of rank for this brand, although it is likely to remain high on the list.
## Top 10 Specialty Drugs

### Trend Components for Top 10 Specialty Drug Therapies by PMPY Spend

There was little change in the top 10 specialty drug list for 2016 when compared to 2015. Harvoni remained at the top of the PMPY spend for 2016, although utilization decreased by 32 percent. Sovaldi moved from fifth position to sixth in the 2016 ranking, with Revlimid taking its place. Epclusa, also to treat Hepatitis C, made an appearance on the list for 2016.

<table>
<thead>
<tr>
<th>2016 Rank</th>
<th>2015 Rank</th>
<th>Drug Name</th>
<th>Therapeutic Class</th>
<th>PMPY Spend</th>
<th>% of Total Spend</th>
<th>Utilization</th>
<th>Unit Cost</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>1</td>
<td>Harvoni (ledipasvir/ sofosbuvir)</td>
<td>Hepatitis C</td>
<td>$36.90</td>
<td>8.8%</td>
<td>-32.0%</td>
<td>-0.9%</td>
<td>-32.5%</td>
</tr>
<tr>
<td>2</td>
<td>2</td>
<td>Humira pen (adalimumab)</td>
<td>Inflammatory disease</td>
<td>$32.87</td>
<td>7.8%</td>
<td>4.2%</td>
<td>22.8%</td>
<td>28.0%</td>
</tr>
<tr>
<td>3</td>
<td>3</td>
<td>Enbrel (etanercept)</td>
<td>Inflammatory disease</td>
<td>$23.83</td>
<td>5.7%</td>
<td>-10.9%</td>
<td>21.4%</td>
<td>8.2%</td>
</tr>
<tr>
<td>4</td>
<td>4</td>
<td>Copaxone (glatiramer)</td>
<td>Multiple sclerosis</td>
<td>$14.62</td>
<td>3.5%</td>
<td>-9.3%</td>
<td>5.7%</td>
<td>-4.1%</td>
</tr>
<tr>
<td>5</td>
<td>6</td>
<td>Revlimid (lenalidomide)</td>
<td>Oncology</td>
<td>$14.34</td>
<td>3.4%</td>
<td>9.6%</td>
<td>10.1%</td>
<td>20.7%</td>
</tr>
<tr>
<td>6</td>
<td>5</td>
<td>Sovaldi (sofosbuvir)</td>
<td>Hepatitis C</td>
<td>$11.31</td>
<td>2.7%</td>
<td>-10.8%</td>
<td>-1.4%</td>
<td>-12.1%</td>
</tr>
<tr>
<td>7</td>
<td>7</td>
<td>Truvada (emtricitabine/ tenofovir disoproxil fumarate)</td>
<td>HIV</td>
<td>$10.26</td>
<td>2.4%</td>
<td>-10.9%</td>
<td>7.7%</td>
<td>-4.1%</td>
</tr>
<tr>
<td>8</td>
<td>8</td>
<td>Tecfidera (dimethyl fumarate)</td>
<td>Multiple sclerosis</td>
<td>$10.11</td>
<td>2.4%</td>
<td>-8.6%</td>
<td>11.0%</td>
<td>1.5%</td>
</tr>
<tr>
<td>9</td>
<td>N/A</td>
<td>Epclusa (sofosbuvir/ velpatasvir)</td>
<td>Hepatitis C</td>
<td>$8.26</td>
<td>2.0%</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
</tr>
<tr>
<td>10</td>
<td>11</td>
<td>Humira (adalimumab)</td>
<td>Inflammatory disease</td>
<td>$7.95</td>
<td>1.9%</td>
<td>-4.2%</td>
<td>20.1%</td>
<td>15.1%</td>
</tr>
</tbody>
</table>

Source: MedImpact Book of Business 2016
The Potential of Biosimilars

There are currently four biosimilars approved by the FDA in the U.S., although only two are currently available on the market. The approved biosimilars for Humira and Enbrel could be delayed for several years due to legal battles. MedImpact anticipates that the biosimilar manufacturers will most likely bring them to market after 2018.

PCSK9 Inhibitors

PCSK9 Inhibitors have a huge potential budget impact due to the prevalence of high cholesterol and the price of the drugs. There was significant payer concern surrounding the possible utilization of these products at an annual wholesale acquisition cost of approximately $14,000 for the treatment of this chronic condition per member. For various reasons including cost, lack of morbidity and mortality data, and potential undesirable route of delivery, the uptake for PCSK9 Inhibitors has been very slow and lower than expected. Amgen announced on February 2, 2016 positive top-line results for the Repatha (evolocumab) morbidity and mortality trial. The trial demonstrated that patients with atherosclerotic cardiovascular disease who received evolocumab (Repatha) had a reduced risk of cardiovascular events. The full details of the results of this trial will be released in March 2017, which will likely lead to an increase in utilization in 2017.

There is an ongoing legal battle between Repatha and Praluent, which could result in a one-product market that eliminates competition that would typically drive down price. We are currently awaiting results from an outcomes trial for cholesterylester transfer protein (CETP) inhibitor, which, if approved, may have advantage over PCSK9 inhibitors because it is an oral medication, not an injectable.

Oncology Drug on Medical Benefit

As mentioned on page 13, new treatments known as CAR T-cell therapy may be introduced into the market in 2017, which hold the promise as a potential cure in select cancers. Although these agents will be on the medical benefit, the price tag will undoubtedly be high if they are able to prove durable response that keeps the cancer from recurring.

CAR T-cell therapy is a novel immunotherapy product created by engineering a cancer patient’s own T-cells to enhance the immune system’s ability to detect and kill cancer cells. CAR T-cell therapy is currently being investigated in numerous aggressive subtypes of leukemia and lymphoma, in which standard therapies like chemotherapy and stem cell transplant have failed. This may provide a treatment option for patients with no existing options for treatment.

Due to the patient-specific manufacturing process of CAR T-cell therapy, the cost of these products is expected to be high, with companies quoting benchmark prices of $300,000 to $900,000 for a single one-time infusion.

Two CAR products, KTE-C19 and CTL019, in development by Kite Pharma and Novartis, respectively, are anticipated to be filed with the FDA in early 2017, and may be on the market by the end of 2017.

In 2017 and 2018, there may be introductions of competition to both Ibrance and Imbruvica, which could impact trend. Although these new products would be branded agents, and would not likely affect utilization, the increased competition could reduce cost.

Biologics Crossing Into “Traditional Spaces”

MedImpact expects to see more biologics available for traditional treatment areas, such as atopic dermatitis and migraine.

Non-Alcoholic Steatohepatitis

Non-alcoholic steatohepatitis, a type of nonalcoholic fatty liver disease, shares many clinical similarities with diabetes and Hepatitis C, and may be the next area of high spend. MedImpact expects to see an increase in treatment costs by 2018.
Drug Pipeline

Trends in Drug Approvals

Specialty drug development is increasing, with orphan and rare diseases making up a significant portion of those agents. Many of these rare and orphan diseases do not have alternative therapies available, allowing them to be priced according to what the market will bear. Most of these agents are being approved with priority review, giving plan sponsors less time to prepare for them clinically and financially. Though biosimilars are expected to provide some relief, this competition could take years to realize, due to the uncertainty of market availability for already approved products as well as the challenges associated with having a biosimilar designated as interchangeable.

Drug Approvals for 2016

In 2016, the FDA Approved
22 New Drugs

73% Used Expedited Development or Review

Orphan or Rare Diseases 41%

Development is moving at a rapid rate and is more complex
With a new administration in the White House, future healthcare legislation and regulation is largely unknown. The new administration brings uncertainty that could either stimulate or stunt business. Much debate was given to potential courses of action during the election, and healthcare stakeholders anticipate Congress will move quickly to act on key issues, including:

- Coverage expansion
- Value-based payment models (e.g., ACOs, MACRA, etc.)
- Increasing pharmacy competition
- State versus federal regulations

In addition to these issues, we expect to see changes to a variety of other key topics and programs affecting drug trend. MedImpact is constantly assessing the market to make educated forecasts and answer common industry concerns.

**Repealing or replacing the Affordable Care Act (ACA)**

**Will insurers continue to participate?**

Given plan sponsor losses, exchange exits and reduced presence in certain markets, individual market stability was already in question before the election. Premiums increased for the 2017 plan year, and a murky outlook for the market beyond 2018 will only increase the reluctance of plan sponsors to commit to participating.

Plan sponsors will look to Congress for a temporary transitional program to help ease uncertainty and maintain a viable market in the near-term. Some proposals will allow plan sponsors to sell policies across state lines, creating a national insurance market.

MedImpact will be integral in helping our clients address the challenges presented by ACA, and any efforts to repeal and replace ACA by the new administration. We have worked closely with government-funded plans and the ever-changing regulations to help keep our Medicare Part D clients informed through our MedImpact Connect webinars.

**Will the pool of patients decrease? Will the young, healthy pool decrease?**

MedImpact anticipates many healthy people may no longer choose to have coverage, putting the at-risk pool in jeopardy with possible unintended consequences of insuring only high-risk populations.

**Will Medicaid expansion continue?**

The federal government may issue block grants to state plan sponsors and turn more control over eligibility to the states. This funding strategy would allow states to determine what services are covered, which supporters say will drive innovation and lower costs, but it could come at the expense of less beneficiary subsidies or a cut to existing benefits.

**What mandates will remain and what will be eliminated?**

Popular provisions may be retained, even if ACA is repealed and replaced. The administration is considering:

- Allowing young adults to retain coverage under their parents’ benefits until the age of 26
- Filling in the Medicare Part D donut hole
- Maintaining existing considerations for pre-existing conditions, provided coverage is maintained continuously

It is less clear whether tax credits will remain available to help pay for insurance premiums. Tax-advantaged health savings accounts, or HSAs, could play a greater role in driving a consumer-based model.
Market Landscape: Political Environment

Drug Inflation

Will drug prices continue to soar?
Market forces such as PBM price controls, continued scrutiny from elected officials, government regulators and media have shone a light on egregious price hikes by pharmaceutical manufacturers. As price inflation has slowed overall in 2016, the market will continue to keep its eye on manufacturers.

Repatriation Tax

How will changes to the repatriation tax affect the pharmaceutical industry?
Repatriation taxes tax U.S. corporations that repatriate funds overseas. There has been much speculation that changing or reducing the repatriation tax will increase investment and revenue in the U.S. Currently, the proposed repatriation tax holiday is 10 percent, in contrast to the current 35-percent rate. This change in tax policy may lead to growth in pharmaceutical and healthcare industries by allowing U.S. companies with significant offshore cash holdings to invest back in the country via acquisition, innovation, hiring, and debt relief.

Value-Based Payment Models

Will the shift to value-based payment models continue?
There is bipartisan support for alternative payment models moving away from traditional fee-for-service and toward paying for quality improvement and cost controls. The shift to value-based payment models will likely continue as an industry best practice.

Market Consolidation

Market consolidation of plan sponsor, pharmacy and PBM markets has continued, and tighter relationships between the industry stakeholders is altering the landscape of healthcare. Despite the fact that federal regulators blocked two large plan sponsor mergers, Anthem–Cigna and Aetna–Humana, respectively, MedImpact expects the move toward consolidation between the top five plan sponsors will continue.

If plan sponsor consolidation doesn’t proceed as expected, it’s predicted that PBMs may be in line to acquire these plans, particularly those plans with government programs that include Medicare and Medicaid, which represent high-growth opportunities.

The wholesale market is also consolidating as the “big three,” AmerisourceBergen (ABC), Cardinal Health (CAH), and McKesson (MCK) respectively, continue to gain share within the specialty and pharmacy services sectors. The specialty pharmacy market itself has experienced significant consolidation activity, with more than 35 merger and acquisition transactions in the past two years.

In the self-funded market segment, coalitions and private broker-led exchanges are growing in importance and relevance. For example, private exchanges led by national brokerage firms such as Aon Hewitt, Mercer, HUB and Willis Towers Watson have all had double-digit growth since 2014, a trend that is expected to continue as employers look to alternative health coverage options for their employees. Additionally, organizations like the Health Transformation Alliance, a group of 30 Fortune 500 companies, strive to attain goals such as improving health outcomes, reducing waste and increasing efficiency in the healthcare supply chain by pooling purchasing power and aligning incentives.
Case Studies: Bending the Trend

The Challenge: Lower Costs with Minimal Member Impact

As spending on the pharmacy benefit increases, plan sponsors are looking for solutions to lower costs where possible while balancing member satisfaction. As a PBM, MedImpact provides a variety of options to reduce costs via formulary management, utilization management, network management, and other clinical programs.

The Solution: Implement Industry Standard “Preferred” Pricing Applied to Pharmacy

Plan members are accustomed to preferred pricing associated with provider networks and formulary drugs, typically via copayment differentials and/or higher deductibles. Plan sponsors can apply preferred pricing to pharmacy networks for an opportunity to reduce costs while providing their members access and choice. A preferred network offers savings by preferring pharmacies, typically one major retail pharmacy chain over another major chain. The non-preferred chain, however, remains available to members as a non-preferred pharmacy with a copayment differential to help drive utilization to lower-cost pharmacies.

In January 2016, a MedImpact client implemented a MedImpact Preferred Pharmacy Network for various regional plans, with approximately 19,500 lives.

This preferred network featured:
- A large pharmacy network with broad access and one major, non-preferred pharmacy chain
- Twice the deductible for members using a non-preferred pharmacy
- Higher coinsurance for members choosing a non-preferred pharmacy

Mitigating Member Disruption

MedImpact is committed to mitigating member disruption due to program changes impacting service, continuity of care or satisfaction. By collaborating closely with the client in advance to ensure members are proactively communicated with and educated about the change has been proven to have the greatest positive impact with the transition.

Prior to program implementation, MedImpact conducted outreach with impacted members and pharmacies to help mitigate disruption. MedImpact identified members utilizing non-preferred pharmacies and the prescriptions they filled at those pharmacies, and sent them letters to notify them of the program change.

Results

The client achieved the following results, derived from claims data in the 16-month timeframe from July 2015 through October 2016:

- Saved $1.27 Per Member Per Month (PMPM)
- Reduced annual spend 3.73 percent
- Increased preferred pharmacy utilization by more than 22 percent

Preferred networks provide plan sponsors the opportunity to realize significant cost savings while providing members access and the freedom of choice between pharmacies.

Source: MedImpact Book of Business 2016

1 MedImpact offers preferred networks in conjunction with prevailing state laws, including but not limited to Any Willing Provider regulations. Please review your state regulations to determine potential impact or ability to implement this program.
Move to MedImpact

All PBMs do not perform the same. Rather than focus on zero admin fee or very high rebate guarantees, MedImpact is focused on low-net cost as offered by our trend-reduction programs. This is evidenced by the fact that clients that moved to MedImpact from other PBMs saved an average of $3.97 PMPM.ii

Clients converting from other PBMs had average PMPM savings of $3.97
Our High-Cost Generics Program is an innovative generic management program that targets high-cost generic medications that have less expensive, clinically appropriate alternatives that may reduce plan sponsor costs. Our clients that implemented our High-Cost Generics Program achieved savings through shifting utilization from high-cost generics to available lower-cost alternatives. MedImpact’s High-Cost Generics Program targets generic drugs with a monthly cost of more than $60, approximately 14 percent of generic claims, and drives behavior change for members to switch to lower-priced generics by:

- Implementing a cost-share differential between high-cost generics and lower-cost alternatives
- Conducting member-specific prescriber outreach to encourage a switch to the lower-cost drug
- Sending member information on lower-cost alternatives
- Delivering custom point-of-sale messages to pharmacies

The MedImpact High-Cost Generics Program can save plan sponsors up to $3.87 PMPM.

The High-Cost Generics Program is one of MedImpact’s programs and services dedicated to driving to lowest-net cost without sacrificing member satisfaction.
MedImpact continues to monitor market dynamics. We proactively work to keep our clients ahead of the market to manage trend and drive to lowest-net cost solutions. Among the many factors affecting drug trend, MedImpact will keep a sharp eye on:

- Specialty spending
- High-deductible health plans
- The biosimilar pipeline
- Healthcare legislation
- Clinical and financial formulary strategy

About MedImpact

MedImpact, an independent, trend-focused pharmacy benefit manager (PBM), is the nation’s largest privately held PBM, serving health plans, self-funded employers and government entities. Our business model is unique. We focus on effectively managing client pharmacy benefits to promote **Lower Cost** and **Better Care** through **One Source**. Our model aligns us with our clients. We help promote prescribing of lower-net-cost, medically appropriate drugs with fulfillment at the most appropriate participating pharmacy providing competitive pricing, good value and high-quality service. Our number-one goal is client satisfaction by providing flexible solutions and member-centric products with a focus on lowest-net cost and quality outcomes. For more information, go to: pbm.medimpact.com

Contact Us for More Information

Please contact your account representative for more information on how we can help you lower costs through effective trend management. If you don’t have any account, email us at info@medimpact.com. You can also see more information at pbm.medimpact.com

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The MedImpact definition of a specialty drug is composed of a proprietary list to include categories sometimes carved-out, such as oncology, anticoagulants, HIV, behavioral health, hematological agents, fertility, and transplant.

The sample data set included clients with 24 months of continuous claim and eligibility data. The following parameters have been established for Carrier HQ exclusion:

- Super Carrier HQs
- Carrier HQs designed as Card Programs
- Carrier HQs with zero eligible or utilizing patients

The Book of Business is composed of our primary benchmarks: Commercial HMO, Medicaid, Self-Funded, Medicare and Marketplace Exchange.

**Overall Trend** = the change in Total Cost PMPM year over year. Total Cost includes ingredient cost, discounts, taxes and dispensing fees, and is net of rebates

**Inflation** = the change in Total Cost per Day Supply (DS) year over year, net of rebates

**Utilization** = the change in Day Supply (DS) PMPM year over year

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