SPENDING HAS SLOWED

HEALTHCARE SPENDING
Spending will be lower than expected for Medicare, Medicaid, and private health insurance

PHARMACY AND DRUG STORES
Strong performance driven by increasing pharmacy sales

REGULATIONS
Increased regulatory activity surrounding ACA subsidies will impact various stakeholders in the healthcare industry
Deals are a moving target. A constantly shifting mix of people, numbers, and timing. We’re here to simplify this process for you. Our experts are dedicated to tracking down and flushing out the values you need, even on the most complex deals. So when the time comes to take your shot with Great American, you’re always—right on the money.
In This Issue

04  Trend Tracker
05  Overview
06  Recent Appraisal and Liquidation Trends
08  Industry Trends
19  Monitor Information
20  Glossary of Terms
25  Experience
27  Appraisal & Valuation Team
28  About Great American Group

GREAT AMERICAN GROUP
A B. Riley Financial Company

Los Angeles (HQ)
21860 Burbank Blvd.
Suite 300 South
Woodland Hills, CA 91367
T 818.884.3737
F 818.884.2976

Charlotte, NC
15720 Brixham Hill Ave.
Suite 300
Charlotte, NC 28277
T 704.227.7161
F 704.227.7171

New York
Graybar Building
420 Lexington Avenue
Suite 3001
New York, NY 10170
T 917.464.1521

Atlanta
1200 Abernathy Rd.
Suite 1700
Atlanta, GA 30328
T 770.551.8115

Boston
300 First Avenue
Suite 201
Needham, MA 02494
T 781.444.1400
F 781.444.1401

Chicago
10 South LaSalle St.
Suite 2170
Chicago, IL 60603
T 312.777.7950
F 312.777.7948

Dallas
2745 North Dallas Parkway
Suite 660
Plano, TX 75093
T 972.996.5630
F 972.996.5639

Milwaukee
10850 West Park Place
Suite 970
Milwaukee, WI 53224
T 414.831.2850

Wilton, CT
73 Old Ridgefield Road
Suite 6
Wilton, CT 06897
T 203.663.5101

Germany
Prinzregentenstr 18
Fifth Floor
80538 Munich,
Germany

Australia
Level 29, Chifley Tower
2 Chifley Square
Sydney, NSW 2000
Australia

© 2016 Great American Group, LLC. All Rights Reserved.
NOLVs: NOLVs for new medical equipment have been mixed over the past six months, increasing for some companies due to the streamlining of inventory, while decreasing for others due to a reduction in selling prices and lower purchasing volumes from customers. NOLVs decreased for supplies due to product mix. NOLVs for pharmaceuticals were mixed, increasing for companies with longer expiration dates and open orders, while decreasing for those with negative shifts in inventory mix, higher weeks of supply, and declining margins. NOLVs increased for supplements due to positive shifts in inventory mix, decreased weeks of supply, and increased sales. NOLVs for retail inventory have remained relatively consistent.

Sales Trends: Sales trends increased for medical equipment due to strategic acquisitions. Trends were mixed for supplies, increasing for some in line with an overall growth in the industry, while decreasing for others due to the discontinuation of business units. Sales trends for pharmaceuticals increased due to a growth in market share, strategic acquisitions, and new product launches. Sales trends increased for supplements due to production efficiencies, increased demand in the nutraceuticals industry, and a growth in sales to customers such as Walmart and Target.

Gross Margin: Gross margins increased for equipment due to increased sales of core products and improved vendor pricing. Margins were mixed for supplies, positive for companies that introduced new products, which typically achieve higher margins, and negative for those that discontinued divisions. Gross margins declined for pharmaceuticals due to increased competition, as well as higher managed-care rebates and other pricing rebates. Margins decreased for supplements due to a shift towards lower-margin products. Margins have been mixed for pharmacy due to rising prices of generics, increases in low-margin specialty drugs, and declining reimbursement rates. Some companies have been able to offset these factors by negotiating better costs from suppliers.

Inventory: Levels of inventory decreased for equipment due to the streamlining of inventory, while levels for supplies were mixed. Pharmaceuticals had increased inventory levels due to companies stocking up on drugs in order to ensure fill rates, as well as new product launches. Inventory levels decreased for supplements due to the timing of orders.

Scripts: Script values have remained relatively consistent.
Overview

Healthcare spending in the U.S. has slowed considerably more than analysts had projected immediately after the passage of The Patient Protection and Affordable Care Act (“ACA”). According to a new study by the Robert Wood Johnson Foundation, the U.S. will spend approximately $2.6 trillion less on healthcare in the five-year period ending in 2019 than originally estimated, despite a short-term spike in spending in 2014. The study indicates that the federal forecast of national healthcare spending under the ACA was largely overestimated, and that healthcare spending has slowed in Medicare, Medicaid, and private health.

Analysts for the Centers for Medicare and Medicaid Services (“CMS”) have estimated that Medicare and Medicaid spending will collectively be $455 billion lower than expected. Medicare spending alone is expected to be $1.05 billion lower than originally estimated largely due to spending cuts of approximately 2% stemming from the Budget Act of 2011. There were also cuts in payments to private Medicare Advantage plans and in annual payments to hospitals and other institutions. The CMS indicates that the use of Medicare services has not grown as quickly as some predicted, despite a growing elderly population.

A sluggish economy largely contributed to a slowdown in Medicaid growth. Spending on private health insurance is also estimated to slow down as a result of the halting economic recovery, a shift to high-deductible insurance plans, and greater cost sharing.

On the other hand, changes in delivery systems, such as the creation of accountable-care organizations and the shift from volume to value, have not had the same cost-saving impact on healthcare as expected. However, analysts indicate that such changes will likely play a larger role in healthcare in the future.
Recent Appraisal and Liquidation Trends

MEDICAL EQUIPMENT
Recovery values for new medical equipment have been mixed over the past six months, increasing for some companies due to the streamlining of inventory, while decreasing for others due to a reduction in selling prices in order to compete with new products in the market, as well as lower purchasing volumes from customers. Recovery values for used medical equipment remain consistent, with continued steady demand for medical products. Sales trends have increased due to strategic acquisitions, with increased sales of core products and improved vendor pricing resulting in an increase in gross margins. Inventory levels have decreased due to the aforementioned streamlining of inventory.

MEDICAL SUPPLIES
Recovery values for medical supplies have decreased due to product mix and a decline in margins as a result of a discontinuation of divisions for certain companies. Sales trends were mixed, increasing for some companies in line with an overall growth in the industry, while decreasing for others due to the aforementioned discontinuation of divisions. Gross margins were also mixed, positive for companies that introduced new products, which typically achieve higher margins, and negative for those that discontinued divisions. Inventory levels were mixed, with some companies increasing stock levels in order to improve fill rates and others reducing inventory levels by divesting divisions.

WHOLESALE PHARMACEUTICALS AND NUTRITION AL SUPPLEMENTS
Recovery values for wholesale pharmaceuticals have been mixed, positively impacted by longer expiration dates and increased open orders and negatively impacted by unfavorable shifts in inventory mix, higher weeks of supply, and declining gross margins. Recovery values increased for supplements due to positive shifts in inventory mix, decreased weeks of supply, and increased sales. Sales trends increased for pharmaceuticals due to a growth in market share, strategic acquisitions, and new product launches. Sales trends increased for supplements due to production efficiencies, increased demand in the nutraceuticals industry, and a growth in sales to customers such as Walmart and Target. Gross margins decreased for pharmaceuticals due to increased competition, as well as higher managed-care rebates and other pricing rebates. Gross margins declined for supplements due to a shift towards lower-margin products. Inventory levels increased for pharmaceuticals due to companies stocking up on drugs in order to ensure fill rates, as well as new product launches. Levels decreased for supplements due to the timing of orders.

THIRD-PARTY PAYORS
GA continues to see an increase in appraisals in which companies sell directly to patients and are becoming increasingly dependent upon payment from third-party payors, usually consisting of Medicare or insurance companies. This trend will likely increase due to heightened ACA activity this year. Recent appraisals featuring this trend have included all healthcare inventory types: equipment, supplies, and pharmaceuticals.

Recovery values in these situations are entirely dependent on companies preparing the necessary forms, as well as doctor authorizations and other paperwork being submitted to the payors for processing and payment. Unlike most other appraisals, which assume cash payment in exchange for goods, these appraisals rely on credit terms being extended to the payors, with payments typically extending an additional 15 to 60 days. For these appraisals, should a liquidation be conducted without credit terms to payors such as Medicare, or should the related companies be dropped from the Medicare program, these companies would have to rely on sales to either cash-paying customers or competitors or other licensed alternative channels, which would negatively impact recovery values.
PHARMACIES AND DRUG STORES
Drugs stores have been performing well in recent quarters driven by increasing pharmacy sales, while front-end sales have been relatively flat. The “Big Three” drugstores (Walgreens, CVS, and Rite Aid), continue to position themselves as wellness companies by bolstering health-related offerings and providing wellness services, while slowly stealing market share from supermarkets with their expanded food offerings. However, the industry continues to be impacted by the conversion of branded drugs to generics and increased penetration of specialty drugs, as well as industry-wide declines in insurance reimbursement rates.

Pharmacy and drug store sales are expected to continue to increase in 2016, particularly as many retailers invest in specialty drug offerings and other pharmacy services, including immunizations and medication therapy management. Furthermore, GA expects most retailers to continue to benefit from greater consumer access to healthcare as a result of the ACA, as more insured Americans will likely translate to increased demand for prescription drugs.

Gross margin trends have also been mixed. Although margin is still benefiting from the continued transition from branded to generic drugs, this shift has slowed considerably. Over the past three years, gross margin has been pressured due to the rising costs of generic drugs, coupled with reduced reimbursement rates. Some retailers were able to offset this by negotiating better deals with suppliers, while others saw a hit to their bottom lines. GA expects gross margin for pharmacy and drug stores to remain pressured in 2016. Gross margins will continue to benefit from the release of new generic versions of popular drugs. Higher acquisition costs of generic drugs and lower reimbursement rates will continue to plague the industry.

Going forward, GA expects recovery values for most pharmacy and drug store retailers to remain relatively consistent with recent trends.

SCRIPTS
Script values have increased in recent years, primarily due to aggressive bidding among major drug store operators such as Walgreens and CVS, as well as large grocery chains and mass merchants, in order to drive customer traffic in their stores.

In the last several months, script values for companies appraised by GA have remained consistent to slightly up. Recent industry transactions may impact script recovery values in the future. There are two notable transactions within the retail pharmacy landscape. Target sold its pharmacy business to CVS for $1.9 billion in December 2015 and is in the process of re-branding the pharmacies, with approximately half completed thus far. In October 2015, Walgreens announced plans to acquire Rite Aid, which could result in the closure of upwards of 1,000 stores. This deal is expected to close sometime in the second half of 2016. These transactions could impact the competitive landscape in certain markets and potentially affect script recovery values.

Recent Appraisal and Liquidation Trends
As the healthcare industry enters into the second half of 2016, ACA-driven regulatory activity, continued increase in mergers and acquisitions (“M&As”), and an heightened focus on supply-chain management will be some of the key issues that all stakeholders in the industry will need to address.

Six years after the launch of the ACA, a federal court ruled in May that billions of dollars in ACA subsidies were paid out to insurers that were not authorized under the law. The lawsuit, led by House Republicans, argued that the Obama Administration had no authority to fund cost-sharing reductions, which provide an additional subsidy to people who earn up to 250% of the poverty line, which ended up being a little more than half of people enrolled in coverage through the health law’s exchanges. The program will not be shut down immediately. Instead, it will keep running as an appeal works its way through the system.

According to consulting firm KPMG, healthcare providers and the pharmaceutical and biotechnology industries are expected to drive most of the M&A activity this year behind only the technology sector. Healthcare M&A activity will be driven by providers looking to expand geographically, develop new service lines, and adjust to changes in reimbursement.

Driven by increased regulations and costs, healthcare providers and suppliers are increasingly looking for more efficient supply-chain management, including investing in more sophisticated supply-chain technology that will allow them to fulfill both the regulatory and commercial demands placed on their businesses.

With more than 6,500 medical device companies, the U.S. remains the largest medical device market in the world, with a market size of around $148 billion, and is expected to reach $155 billion by 2017. As the overall healthcare industry increasingly turns to mobile technology, the medical equipment sector will be at the heart of this transition. Subsequently, cybersecurity will continue to remain a main concern for the medical equipment industry. In order to address such concerns, in January 2016, the U.S. Food and Drug Administration (“FDA”) issued a draft guideline outlining important steps medical device manufacturers need to take in order to address cybersecurity concerns, keep patients safe, and better protect the public health. The draft guideline details the agency’s recommendations for monitoring, identifying, and addressing cybersecurity vulnerabilities in medical devices once they have entered the market.
Industry Trends

MEDICAL SUPPLIES
Demand for disposable medical supplies in the U.S. is forecast to grow 4.2% annually to total $54.1 billion in 2020. As demand for industry products increases primarily due to growing health concerns and increased access to health insurance coverage, the medical supply market will largely be influenced by cost-containment strategies by public and private health insurers. Hospitals and other medical providers will be more sensitive to prices when purchasing products. Based on growth in the number of patients who require surgery or long-term therapy, drug delivery and related products will remain the largest and fastest-expanding segment of disposable medical supplies.

WHOLESALE PHARMACEUTICALS
According to consulting firm PwC, by 2020, many of the drugs produced by the pharmaceutical industry will consist of specialty drugs that require drastically different manufacturing and distribution processes from those used to produce more conventional drugs. Industry analysts estimate that, by 2016, bio-engineered vaccines and biologics will account for approximately 23% of the global market, up from 17% in 2009. As a result, the supply chain for many pharmaceutical companies will need to undergo drastic changes, including the incorporation of custom production models for different product types and patient segments. While many drug companies have refined their supply chains, most of the changes they have introduced have been short-term measures to address only immediate challenges, and only a few companies, if any, have made true progress in making sure their processes meet the current needs and demands of the industry.

Additionally, industry analysts indicate that besides redefining their manufacturing and distribution processes, companies in the pharmaceutical industry will be required to get a better understanding of patients in order to be able to successfully operate in the new outcome-oriented reimbursement environment. Companies that are able to develop and provide integrated product-service packages will be far better equipped to succeed.

NUTRITIONAL SUPPLEMENTS
According to Nutraceuticals World, the nutritional supplements industry is standing at a crossroads, and the decisions it makes within the next 12 months regarding how to deal with regulatory compliance, congressional oversight, ongoing media scrutiny, and declining consumer confidence, as well as how it addresses the new challenge of increased enforcement activity by state attorney generals and the subsequent risk of future litigation activity, will collectively determine whether the industry remains a viable and valued player in and a contributor to the national healthcare industry.
MAJOR INDUSTRY PLAYERS

Brand Name Drug Manufacturers

In July 2016, the FDA issued a draft guideline to clarify when compounding pharmacies are allowed to make their own versions of commercially available drugs. The guidelines would permit compounders to make versions of brand name drugs when a shortage exists or when the brand name drug has been discontinued. This represents a challenge for brand name drug manufacturers, as a compounded version of a drug would be cheaper than a branded version. Brand name drug makers would be less likely to invest in innovative medicines if a compounding pharmacy, especially one making large quantities of a drug, is otherwise permitted to make and sell versions of treatments approved by the FDA.

Johnson & Johnson (“J&J”), Merck and Co., Inc. (“Merck”), and Amgen currently represent the brand name drug manufacturing industry’s top three players. Worldwide pharmaceutical sales for J&J increased 5.9% to $8.2 billion for the first quarter of 2016 versus the first quarter of 2015. J&J attributed the increase to the launch of new products, including an approval by the FDA for an additional indication for cancer drug Imbruvica, as well as strong demand for existing core products.

First-quarter pharmaceutical sales for Merck declined 2.0% to $8.1 billion versus the same quarter in 2015. Merck attributed the decline largely to a decrease in sales for Remicade, a treatment for inflammatory disease, due to strong competition from biosimilar drugs in the company’s marketing territories in Europe, as well as reduced operations in Venezuela.

Amgen’s first-quarter 2016 revenues increased 10.0% to $5.5 billion. The increase was driven by a 7% increase in product sales of Enbrel, Prolia, Aranesp, Neulasta, Kyprolis, and Xgeva. Amgen also attributed the increase to improved gross profits as a result of manufacturing efficiencies, higher net selling prices, and lower royalties.

### Top Brand Name Drug Manufacturers

<table>
<thead>
<tr>
<th>Top Brand Name Drug Manufacturers</th>
<th>First-Quarter 2016 Revenues</th>
<th>% Change from First-Quarter 2015</th>
</tr>
</thead>
<tbody>
<tr>
<td>J&amp;J</td>
<td>$8.2 billion</td>
<td>5.9%</td>
</tr>
<tr>
<td>Merck</td>
<td>$8.1 billion</td>
<td>(2.0%)</td>
</tr>
<tr>
<td>Amgen</td>
<td>$5.5 billion</td>
<td>10.0%</td>
</tr>
</tbody>
</table>
## Industry Trends

### Major Industry Players

**Generic Drug Manufacturers**

The U.S. drug market has experienced a large transformation over the last three years. Generic drugs have gone from representing less than 20% of total prescriptions to account for the majority of the total prescriptions dispensed in the U.S. The largest catalyst for this growth was the significantly lower price of generics versus branded drugs. Additionally, the global generic drug market is forecast to grow at a compound annual growth rate of 10.5% from 2016 to 2020.

In June 2016, leaders on the Senate Committee on the Judiciary introduced bipartisan legislation that will make it easier for generic drug manufacturers to appeal delay tactics that the legislation indicates are used by brand name drug manufacturers to block generic drug approvals by the FDA. The CREATES Act was introduced to address complaints raised by generic drug makers that some brand name drug companies are engaging in anti-competitive behavior.

Sandoz, Teva Pharmaceutical Industries, Ltd. (“Teva”), and Mylan, Inc. (“Mylan”) currently represent the industry’s top three players. Sandoz, the generic drug division of global healthcare company Novartis, reported revenues of $2.4 billion for the first quarter of 2016, a 4.0% increase from the first quarter of 2015. The increase in revenue for Sandoz largely stemmed from strong global sales of its biopharmaceuticals products, which climbed 50% as a result of new product launches, including glatopa in June 2015 and zarxio in September 2015.

Revenue for Teva’s generic drugs business declined 17.0% to $2.2 billion in the first quarter of 2016 versus the first quarter of 2015. Teva attributed the decrease mainly to a 32% decline in U.S. sales due to the loss of exclusivity on drugs such as esomeprazole and budesonide.

Mylan reported revenues of $1.9 billion for its generic drug segment for the first quarter, representing a 17.0% increase from 2015. Mylan attributed the increase to an increase in North American sales of products launched since April 1, 2015, as well as increased European sales primarily due to strong sales for established products.

<table>
<thead>
<tr>
<th>Top Generic Drug Manufacturers</th>
<th>First-Quarter 2016 Revenues</th>
<th>% Change from First-Quarter 2015</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sandoz</td>
<td>$2.4 billion</td>
<td>4.0%</td>
</tr>
<tr>
<td>Teva</td>
<td>$2.2 billion</td>
<td>(17.0%)</td>
</tr>
<tr>
<td>Mylan</td>
<td>$1.9 billion</td>
<td>17.0%</td>
</tr>
</tbody>
</table>
### MAJOR INDUSTRY PLAYERS

#### Drug Distributors

McKesson Corporation (“McKesson”), AmerisourceBergen Corporation (“AmerisourceBergen”), and Cardinal Health, Inc. (“Cardinal Health”) represent the drug wholesaling industry’s “Big Three” players.

McKesson posted revenues of $40.6 billion for its North American pharmaceutical distribution segment for the second quarter of 2016, representing an increase of 16.0% from the second quarter of 2015. McKesson attributed the growth in revenue primarily to general market growth and the mix of its business. Revenue for AmerisourceBergen’s pharmaceutical distribution segment, which consists of both AmerisourceBergen Drug Corporation (“ABDC”) and AmerisourceBergen Specialty Group (“ABSG”), increased 8.0% to $34.2 billion in the second quarter versus 2015. ABDC revenues increased 6.0% due primarily to strong organic sales growth from the company’s chain retail and health systems customers. ABSG revenues increased 18%, which was primarily driven by strong performance in the division’s oncology business and its third-party logistics business. Revenues for Cardinal Health’s pharmaceutical segment increased 25.0% to $28.3 billion in the second quarter. Cardinal Health attributed the increase to growth from new and existing customers, as well as strategic acquisitions.

#### Medical Device Manufacturers

According to medical device business journal *MassDevice*, the increasing influence that hospital group purchasing organizations (“GPOs”), insurers, and other large payors have on purchasing and reimbursement decisions may be hindering product innovation and research and development in the medical device manufacturing industry. Additionally, *MassDevice* indicates that in an unrelenting effort to decrease healthcare costs, the clout that such organizations hold over device companies may ultimately result in quality issues.

General Electric Company (“GE”), Medtronic, Inc (“Medtronic”), and St. Jude Medical, Inc. (“St. Jude”) currently represent the medical device manufacturing industry’s largest players. Revenues for GE’s healthcare segment increased 3.0% to $4.2 billion for the first quarter of 2016 versus the first quarter of 2015. GE attributed the increase to an increase in equipment orders. Revenues for Medtronic increased 14.0% to $4.1 billion in the first quarter primarily due to broad customer acceptance of the company’s innovative therapies. St. Jude reported revenues of $1.4 billion for the first quarter, representing an increase of 8.0% from 2015, with the growth primarily attributed to new product approvals and subsequent launches in key regions around the world.

### Top Medical Device Manufacturers

<table>
<thead>
<tr>
<th>Top Medical Device Manufacturers</th>
<th>First-Quarter 2016 Revenues</th>
<th>% Change from First-Quarter 2015</th>
</tr>
</thead>
<tbody>
<tr>
<td>GE</td>
<td>$4.2 billion</td>
<td>3.0%</td>
</tr>
<tr>
<td>Medtronic</td>
<td>$4.1 billion</td>
<td>14.0%</td>
</tr>
<tr>
<td>St. Jude</td>
<td>$1.4 billion</td>
<td>8.0%</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Top Drug Distributors</th>
<th>Second-Quarter 2016 Revenues</th>
<th>% Change from Second-Quarter 2015</th>
</tr>
</thead>
<tbody>
<tr>
<td>McKesson</td>
<td>$40.6 billion</td>
<td>16.0%</td>
</tr>
<tr>
<td>AmerisourceBergen</td>
<td>$34.2 billion</td>
<td>8.0%</td>
</tr>
<tr>
<td>Cardinal Health</td>
<td>$28.3 billion</td>
<td>25.0%</td>
</tr>
</tbody>
</table>
In May 2016, nine national and 24 state healthcare and lobbying associations representing durable medical equipment (“DME”) suppliers collectively sent a letter to Congress to support a bill that would delay implementation of federally mandated competitive bidding processes and expected Medicare reimbursement cuts to their members serving rural and low-population areas. Supporters of the bill, called the Patient Access to Durable Medical Equipment Act of 2016, claim that the proposed legislation would ensure access to vital healthcare technology, especially in smaller, isolated markets. Today, DME providers serving the 100 largest metropolitan statistical market areas, which represent 58% of the Medicare population, must participate in the CMS’ competitive bidding process.

The supporters of the bill include associations representing homecare, oxygen, home infusion, and long-term care providers who argue that in larger metropolitan areas, their members can offset the reimbursement cuts brought on by competitive bidding with larger volumes of business and greater market share. They noted that on the other hand, suppliers serving smaller markets of patients barely break even. As such, they argue that the introduction of competitive bidding in smaller markets would financially harm DME providers and force them to exit the market, leaving vulnerable patients without needed equipment and services.

Cardinal Health and Owens & Minor, Inc. (“Owens & Minor”) represent the industry’s top two players. Cardinal Health reported revenues of $2.9 billion for the first quarter of 2016 for its medical segment, which represented an increase of 2.0% versus the first quarter of 2015. Cardinal Health attributed the increase in revenue to a growth in Cardinal Health-branded products and the Cardinal Health at Home platforms. Owens & Minor reported revenues of $2.5 billion for the first quarter, an increase of 2.0% versus 2015. Owens & Minor attributed the increase to changes to its leadership team, organizational structure, and budgeting and financial reporting processes, as well as larger healthcare provider customer accounts.
PHARMACY

Prescription Drug Spending
Spending on prescription medicine increased 8.5% in 2015 to $310 billion on a net price basis (adjusting for the impact of estimated rebates and other price concessions), up from a 3.2% increase versus last year, per IMS Health. Factors driving the increase include a growth in spending on high-cost specialty medicines, a reduction in the number of patent expirations, as well as price hikes of branded and generic drugs. Specialty drug spending reached $121 billion on a net price basis, up more than 15% from 2014. Spending on prescription drugs is expected to increase going forward, particularly as more Americans begin to utilize ACA benefits and services. IMS Health estimates U.S. spending on medicines on a net price basis will reach $370 to $400 billion by 2020, growing at a compound annual growth rate of 4% to 7%.

Specialty Biologic Drugs and Biosimilars
Specialty biologic drugs are expected to account for 50% of drug industry revenues by 2018. As such, many pharmacies are offering an increased assortment of biologic specialty drugs in order to offset sales declines due to the increased use of generics. Due to their high cost, specialty drugs represent one-fourth of all prescription drug costs, as a single prescription can cost upwards of several hundred thousand dollars over the course of a year.

Industry and consumer groups have voiced concern over the high-cost of specialty drugs and are urging drug makers to develop lower-cost generic versions, or biosimilars.

Unlike pharmaceutical generic drugs, which are identical to their branded counterparts, generic versions of specialty biologic drugs may not be derived from the same stem cell strain as the branded biological drug, making them similar, but not identical. As such, no biosimilars were available on the market until early 2015, when the FDA approved Zarxio, a biosimilar used to increase white-blood cell counts to reduce the occurrence of infection in cancer patients receiving chemotherapy treatments.

The approval of Zarxio is expected to pave the way for additional biosimilars to enter the market, which will save insurers and patients billions of dollars over the next decade. Four other biosimilars remain in review, and pundits expect the industry to expand rapidly. According to a MarketsandMarkets report, the biosimilar industry is expected to reach $6.2 billion in value by 2020.

The Biosimilars Council of the Generic Pharmaceutical Association reports that the patents for eight biologics will expire by 2020, including several in 2016, which should translate to industry growth. The biggest expiration in 2016 is Humira, which is one of the top-selling drugs of all time. Pharmaceutical company Amgen has already filed an application to produce a Humira biosimilar, which could reach the market as early as 2017. Other drugs with recent or upcoming expirations include Rituxan (June 2016), Avastin (2017), and Remicade (2018).
As scientists and healthcare providers have argued in recent years about the technical comparability of biosimilars and branded drugs, The Academy of Managed Care Pharmacy is launching an online biosimilar resource center to clarify questions for consumers.

**Branded versus Generic Pharmaceutical Drugs**

In recent years, branded and generic drugs have engaged in a contentious pricing war. While branded drugs are protected by patents that allow the manufacturer to sell their products exclusively for a certain time frame, the FDA and other pieces of legislation have aimed to limit the lifetime of a branded drug patent. At the end of June 2016, two U.S. Senators introduced a new bill that aims to shorten the period of exclusivity for brand name biologic products.

While they generate lower sales volume for retailers, generics also achieve much higher margins, which are appealing to many retailers and insurance companies. However, over half of all generic drugs increased in price between 2013 and 2015 due to a variety of factors, including higher costs of raw materials, increased expenses associated with FDA standards, as well as reduced competitive pressures as a result of manufacturer consolidation. The sharp rise in price of some generics put additional pressures on small chain and independent pharmacies in particular. More recently, it appears that the generic price hikes have been slowing. In the second quarter of 2015, average prices increased 2.6% compared to an average increase of 25.7% in the second quarter of 2014.

According to IMS Health, the value of expiring patents was $23 billion in 2015, which is much lower than the $35 billion in 2012, which was the biggest year for patent expirations. In 2016, the value of patent expirations is predicted to be $22.2 billion, led by cholesterol and HIV drugs such as Crestor, Benicar, and Epzicom.

**Reimbursement Rates**

Another major financial trend in the pharmacy industry has been the general decline in reimbursement rates that retailers receive from insurance companies, particularly in the setting of rising generic drug costs. Effective April 1, 2016, Medicare & Medicaid Services Covered Outpatient Drugs’ final rule redefines the Average Manufacturer Price, which is a key metric for determining rebates and pharmacy reimbursements for generic drugs that are subject to the Federal Upper Limit (the maximum a state can reimburse a pharmacy). This change allows for the costs of generic drugs to be updated regularly and creates an incentive for pharmacies to substitute generics when possible.

In addition, the final rule includes changes to ensure that pharmacy reimbursements are aligned with the actual acquisition cost of the drug and that appropriate dispensing fees are factored. These changes are expected to have a positive impact on pharmacy gross margins in the future.

**Preferred Networks**

Reimbursement rates as a whole have been impacted by retailers’ attempts to expand their participation in preferred networks in order to increase script sales and foot traffic, to the detriment of gross margin. Many companies strive to accept as many plans as possible, but must be selective to ensure that the business is profitable.

In particular, when acquiring script files, retailers will review the networks in which the target company participates and compare it to their own. If there is a significant discrepancy, the retailer may submit a lower bid to account for the loss of business from certain customers. In other instances, the retailer may seek to become part of an additional network in order to retain those customers, often at the expense of gross margin. The popularity of preferred networks is increasing due to their promises of high quality products, cost effective methods, and lower federal spending.
Industry Trends

Recent statistics reveal that pharmacy benefit managers ("PBMs") have been increasing fees, which drives up prices. In recent years, PBMs have consolidated significantly, allowing them to negotiate lower reimbursement prices. According to BenefitsPro, a survey of 640 pharmacies found that 87% believe that direct and indirect remuneration fees ("DIR fees") from PBMs have significantly affected their ability to run a business and provide care to patients.

PHARMACY

340b Contract Pharmacies

The 340b drug pricing program was created in 1992 as part of the Veterans Health Care Act and aims to provide medication discounts for healthcare providers servicing low-income patients. Participating healthcare providers must meet specific qualifications in order to arrange a contract with the federal government. According to Pharmacy Times, these discounts can reach up to 50% and hospitals are permitted to generate profit from retail drug sales.

The 340b program has been a controversial issue as many industry professionals question the integrity of the program’s regulations. The OIG report from the U.S. Department of Health and Human Services indicates the statute does not restrict how covered entities may use the extra funds and suggests that not enough of the money goes to the uninsured patients for whom the program was originally intended.

Participation in the 340b program has swelled in recent years, in part due to recent entity eligibility changes as a result of the passage of the ACA. According to Drug Channels, discounted purchases made under the 340b program have increased by 67% from 2013 to 2016, reaching $12 billion in 2015 alone. Furthermore, total hospital drug purchases grew by 31% for 2005-2015, while 340b purchases have grown more than 400% over the same period of time.

Technology

As e-commerce and social media have become increasingly popular in all areas of retail, pharmacy is no exception. The use of mobile technology and smartphone applications, also referred to as mHealth, has become a staple of American healthcare, as smartphones are easily accessible, engaging, and provide a means of storing and tracking data. Major competitors Walgreens, Rite Aid, and CVS have all released mobile applications that allow patients to refill or transfer prescriptions, order photos, shop online, and keep up with their customer rewards, among several other useful tasks.

Telemedicine has also opened unprecedented opportunities to the healthcare industry, as The Wall Street Journal reports that the technology is finally living up to its potential. Telemedicine allows patients to communicate with doctors via email, phone, and most importantly webcam. With the ability to communicate blood pressure, heart rate, and other vital signs, patients can monitor chronic conditions or communicate health concerns from their homes.

Furthermore, telemedicine grants medical help to populations that normally have limited healthcare access. Doctors Without Borders reportedly answer questions five to 10 times per day from patients across the globe. One new facility, Mercy Health System’s Virtual Care Center, has become known as a “hospital without beds.” It offers remote assistance to intensive-care units and emergency rooms in 38 hospitals from North Carolina to Oklahoma.

Pharmaceutical retailers must also remain aware of new technological advances in wearable technology, three-dimensional printing, disinfecting robots, and several others, according to Healthcare IT News.
Despite the increase in insured individuals via the ACA, the shortage of primary care doctors in the U.S. remains a threat to the medical field. According to the Association of American Medical Colleagues, there could be a shortage of up to 90,000 physicians by 2025. This gap in medical employment has increased traffic in pharmaceutical retail clinics, such as CVS’s MinuteClinic, Walgreen’s Healthcare Clinic, and Rite Aid’s NowClinic. Drug stores and pharmacies are positioning themselves as critical healthcare providers, as many Americans rely on pharmacists for basic healthcare. According to Accenture, retail pharmacy clinics have become so popular in American healthcare that there will be about 2,150 clinics in the U.S. by end of 2016, a number which will likely exceed 2,800 in two years.

Retail clinic services for commercially insured patients are often more cost effective than care that was initiated by physician offices. According to Drug Store News, more than a quarter of emergency room visits could be handled in retail clinics, leading to a $4.4 billion reduction in healthcare spending. Though these cost saving benefits are sometimes weakened by patients who request services for minor problems that could likely have been cured independently, the popularity of retail pharmaceutical services has been steadily increasing in recent years.

Retail clinics are gaining certifications to offer a wide variety of services, from physical examinations to medication therapy management. In addition, several states have passed laws allowing pharmacists to administer more types of vaccines and immunizations. As such, national and regional pharmacy chains, as well as supermarkets with pharmacies within, have been working to expand their immunization services, as these services represent additional sales as well as the potential to gain new pharmacy customers.

There continues to be growth potential for immunization services, such as for the flu, as well as shingles and hepatitis A and B, among others. Other services include health screenings, such as those offered by CVS, Walgreens, and Rite Aid, as well as mass merchants, such as Sam's Club.

As of July 2016, Walgreens has asserted itself at the forefront of retail clinic presence, operating more than 350 corporate-owned Healthcare Clinics across 20 states, as well as another 50 clinics in stores that are run by other providers. As of April 2016, the company made a deal with SSM Health whereby SSM would operate 27 of Walgreens’ clinics in St. Louis, Missouri. Walmart has also expanded its retail clinics, reaching more than 100 clinics across 5,000 stores nationwide. The majority of these clinics are operated by local hospitals and healthcare groups under the company’s banner, while another 18 are operated by Walmart as Care Clinics.

Diversifying revenue streams has been a popular topic of discussion among pharmacy retail executives, specifically at CVS, which recognized potential for higher profit margins with increased attention to front-end sales. According to Chain Store Age, CVS elevated its cosmetics wall across 4,500 locations, installed more self-service customer units in 1,600 stores, and improved its facial offerings in 2,000 stores. As a result, the company achieved a 3.7% increase in health and beauty sales among the remodeled stores.

A recent study found that many younger consumers shop consumables primarily at drug stores, dollar stores, and convenience stores, as these retailers typically offer compelling promotions. Retail Insights also noted that products in categories such as cough-cold-allergy, digestive, vitamins and supplements, pain relief, and home health care are the most significant profit drivers for pharmacy retail stores. According to Retailing Today, CVS announced that it would be offering healthier food and snack options across 2,900 locations, up from the 500 that the company piloted last year.
Industry Trends

COMPETITIVE LANDSCAPE

**Walgreens**
After its 2015 acquisition of Alliance Boots, the company is present in over 25 countries and operates more than 13,000 stores worldwide. Currently the world’s largest pharmacy retailer, Walgreens will continue to expand after its upcoming acquisition of Rite Aid. The purchase remains a work in progress as the $17 billion deal waits for regulators to approve the massive reduction in the industry’s competitive landscape. The acquisition is expected to give the retailer more clout with suppliers, which could translate to reduced costs.

Shareholders have been warily anticipating the result of Walgreens’ proposed acquisition, which caused shares of the company to dip. Also, Walgreens recently paid the State of New York $500,000 in a settlement case regarding false advertising of prices. Despite recent setbacks, Walgreens consistently reports strong sales and continued growth through acquisitions and cost-cutting strategies. However, recent front-end sales were negatively impacted by a weak flu season.

**Rite Aid**
Rite Aid, which operates approximately 4,500 stores across 31 states, stands as the third-largest pharmacy retailer in the U.S. While Rite Aid has also been awaiting approval to merge with Walgreens Boots Alliance, revenue has mostly plateaued. Though front-end sales were up, the company missed profit during its latest quarter, losing $4.6 million and breaking even on a per share basis.

**CVS**
CVS has notably expanded after acquisitions of long-term care (“LTC”) pharmacy, Omnicare, and Target’s pharmacies. It currently operates almost 10,000 retail pharmacies and 1,100 walk-in medical clinics. Together, CVS and Walgreens own more than half of the U.S. market share for pharmacies and drug stores. Unlike Walgreens, which is attempting to grow through its acquisition of Rite Aid, CVS has been slowly buying up PBMs, which helps to direct individuals to fill their prescriptions at a CVS store. According to *Forbes*, revenue for CVS Health, the company’s PBM division, exceeded its earnings expectations by surging 20% in all key segments of company operations. The company currently fills approximately 20% of all retail prescriptions in the U.S.

Within its front-end business, the company has been focusing on improving its health and beauty products to boost profit margins. With its new “health quadrant” in place, front-end sales for Walgreens have steadily increased from growing purchases of vitamins, allergy and cold medications, and healthy food products.

<table>
<thead>
<tr>
<th></th>
<th>Most Recent Quarter</th>
<th>Prior Quarter</th>
<th>Two Quarters Ago</th>
<th>Three Quarters Ago</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Walgreens</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pharmacy</td>
<td>6.0%</td>
<td>3.7%</td>
<td>9.3%</td>
<td>7.0%</td>
</tr>
<tr>
<td>Front-End</td>
<td>0.1%</td>
<td>(0.3%)</td>
<td>(0.6%)</td>
<td>1.6%</td>
</tr>
<tr>
<td>Total</td>
<td>3.9%</td>
<td>2.2%</td>
<td>5.8%</td>
<td>6.3%</td>
</tr>
<tr>
<td><strong>CVS</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pharmacy</td>
<td>5.5%</td>
<td>5.0%</td>
<td>4.6%</td>
<td>4.1%</td>
</tr>
<tr>
<td>Front-End</td>
<td>0.7%</td>
<td>(0.5%)</td>
<td>(5.8%)</td>
<td>(7.8%)</td>
</tr>
<tr>
<td>Total</td>
<td>4.2%</td>
<td>3.5%</td>
<td>1.7%</td>
<td>0.5%</td>
</tr>
<tr>
<td><strong>Rite Aid</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pharmacy</td>
<td>0.1%</td>
<td>(0.8%)</td>
<td>1.2%</td>
<td>2.8%</td>
</tr>
<tr>
<td>Front-End</td>
<td>1.2%</td>
<td>(0.4%)</td>
<td>0.3%</td>
<td>0.3%</td>
</tr>
<tr>
<td>Total</td>
<td>0.4%</td>
<td>(0.6%)</td>
<td>0.9%</td>
<td>2.1%</td>
</tr>
</tbody>
</table>
GA’s Healthcare & Pharmacy Monitor relates information covering medical equipment, supplies, pharmaceuticals, nutritional supplements, and scripts, including industry trends and demand factors, their relation to our valuation process, as well as current recovery trends. The healthcare industry’s evolving regulatory environment makes accurate and up-to-date information essential. GA strives to contextualize important indicators in order to provide a more in-depth perspective of the market as a whole. GA welcomes the opportunity to make our expertise available to you in every possible way. Should you need any further information or wish to discuss recovery ranges for a particular segment, please feel free to contact your GA Business Development Officer using the contact information shown in this and all Healthcare & Pharmacy Monitor issues.

GA’s Healthcare & Pharmacy Monitor provides a brief overview highlighting specific sectors of the healthcare industry. The information contained herein is based on a composite of GA’s industry expertise, contact with industry personnel, liquidation and appraisal experience, and data compiled from a variety of well-respected sources believed to be reliable.

GA does not make any representation or warranty, expressed or implied, as to the accuracy or completeness of the information contained in this issue. Neither GA nor any of its representatives shall be liable for use of any of the information in this issue or any errors therein or omissions therefrom.
Glossary of Terms

REGULATORY TERMS

• **501 (k) Clearance**: Also known as Premarket Notification, 501 (k) is part of the Food, Drug, and Cosmetic Act, which requires medical device makers to notify the FDA at least 90 days in advance of their intent to market a medical device.

• **ACA**: The ACA is a U.S. federal statute signed into law by President Obama on March 23, 2010. The law requires all insurance companies to cover all applicants within new minimum standards and offer the same rates regardless of pre-existing conditions or sex.

• **ANDA (Abbreviated New Drug Application)**: The application submitted to the FDA for the review and ultimate approval of a new generic drug. Generic drug applications are termed “abbreviated” because they are generally not required to include pre-clinical (animal) and clinical (human) data to establish safety and effectiveness. Instead, generic drug applicants must scientifically demonstrate that their product is bioequivalent, which means that it performs in the same manner as its branded counterpart.

• **CDC (Centers for Disease Control and Prevention)**: A federal agency operating under the Department of Health and Human Services, the CDC is the national public health institute of the U.S. responsible for protecting the public health and safety through the control and prevention of diseases, injury, and disability. The CDC particularly focuses on infectious diseases, food-borne pathogens, environmental health, occupational safety and health, health promotion, and injury prevention.

• **CFR Title 21 (Code of Federal Regulations Title 21)**: The codification of the general and permanent rules published in the Federal Register by the Executive departments and agencies of the Federal Government.

• **Class I, II, and III Medical Devices**: Classification is based on the level of risk that the device poses to the patient and/or the user. Class I devices, which include tongue depressors, gloves, crutches, and wheelchairs, pose the lowest level of risk. Class II devices, which include syringes and thermometers, pose a medium-level risk. Class III devices, which include surgical instruments such as scalpels and defibrillators, pose the highest risk level.

• **DEA (Drug Enforcement Administration)**: A U.S. federal law enforcement agency under the U.S. Department of Justice that is responsible for combating drug smuggling and use within the U.S. The mission of the DEA is to enforce controlled substance laws and regulations.

• **DMEPOS (Durable Medical Equipment, Prosthetics, Orthopedics, and Supplies) Competitive Bidding**: A competitive bidding program mandated by Congress through the Medicare Prescription Drug, Improvement, and Modernization Act of 2003. The program, which Medicare is phasing in for some areas of the country, changes the amount Medicare pays suppliers for certain DMEPOS, and changes who can supply these items.
Glossary of Terms

REGULATORY TERMS (continued)

- **DQSA (The Drug Quality and Security Act):** The law, which was signed into law by President Obama on November 27, 2013, will be rolled out in various stages in 2015. The law requires that all drug manufacturers, repackers, wholesale distributors, dispensers, and third-party logistics providers implement a new drug-tracking system that utilizes serial numbers.

- **Drug Recall:** An action taken by a firm to remove a pharmaceutical product from the market because the product violates rules and regulations set forth by the FDA. Recalls are classified as Class I, Class II, or Class III. Class I recalls are the most serious and involve situations where there is a reasonable probability that the use of or exposure to the drug in question will cause serious adverse health consequences or death. A drug may be recalled due to factors such as problems with packaging, manufacturing, or contamination.

- **FDA:** A federal agency of the U.S. Department of Health and Human Services responsible for protecting and promoting public health via the regulation and supervision of food, tobacco products, dietary supplements, prescription and over-the-counter pharmaceutical drugs, vaccines, biopharmacies, blood transfusions, medical devices, cosmetics, animal feed, and veterinary products.

- **Medicaid:** A U.S. social healthcare program for families and individuals with low income and limited resources. Medicaid is jointly funded by the state and federal governments and is managed by the states, with each state currently maintaining broad leeway to determine program eligibility and implementation.

- **Medicare:** A national social insurance program that has been administered by the U.S. federal government since 1966 and currently utilizes approximately 30 private insurance companies across the U.S. Medicare provides health insurance for Americans aged 65 or older who have worked and paid into the system, as well as for younger people with disabilities, end-stage renal disease, and amyotrophic lateral sclerosis.

- **Medicare Part A (“Hospital Coverage”):** Covers hospital care, skilled nursing facility care, nursing home care (as long as custodial care is not the only care needed), hospice care, and home health services.

- **Medicare Part B (“Physician Coverage”):** Covers two types of services: medically necessary services, which represent services and supplies that are needed to diagnose or treat medical conditions and that meet accepted standards of medical practice, and preventive services, which represent healthcare to prevent illness (like the flu) or detect it at an early stage when treatment is mostly likely to work best.

- **Medicare Part C (“Medicare Advantage”):** A Medicare-approved private health insurance plan for individuals eligible for or enrolled in Medicare Part A and Part B. Medicare Part C provides all Medicare Part A (hospital coverage) and Medicare Part B (medical insurance) coverage, and generally offers additional benefits, such as vision, dental, and hearing, and may include prescription drug coverage.
Glossary of Terms

REGULATORY TERMS (continued)

- **Medicare Part D (“Prescription Drug Coverage”):** Helps to cover the costs of prescription drugs.

- **NDA (New Drug Application):** The process through which pharmaceutical manufacturers get approval from the FDA for the sale and marketing of a new drug. The application must contain data from specific technical viewpoints for review, including chemistry, pharmacology, medical, biopharmaceuticals, and statistics. If the NDA for a new drug is approved, the drug may be marketed in the U.S.

- **NDC (National Drug Code Directory):** A part of the Drug Listing Act of 1972 requiring registered drug establishments to provide the FDA with a current list of all drugs manufactured, prepared, propagated, compounded, or processed by it for commercial distribution.

- **NHA (National Health Expenditure):** An estimate of U.S. healthcare spending over the next decade.

- **Orange Book:** Refers to the FDA’s publication, *Approved Drug Products with Therapeutic Equivalence Evaluations*, which identifies drug products approved on the basis of safety and effectiveness by the FDA under the Federal Food, Drug, and Cosmetic Act. The publication does not include drugs on the market approved only on the basis of safety review and excludes pre-1938 drugs.

- **Payor:** Any legal entity, excluding the patient, that is responsible for handling claims for healthcare services provided to patients that receive a state or federal medical assistance program, such as Medicare or Medicaid.

- **Pink Book:** A book published by the CDC to provide physicians, nurses, nurse practitioners, physician assistants, pharmacists, and other with comprehensive information on vaccine preventable diseases.

- **PMA (Premarket Approval):** The FDA’s scientific and regulatory review process to evaluate the safety of Class III medical devices, including devices that support or sustain human life, are of substantial importance in preventing impairment of human health, or present a potential, unreasonable risk of illness or injury.

- **PPSA (Physician Payments Sunshine Act):** Requires medical product manufacturers to disclose to the CMS any payments or other transfers of value made to physicians or teaching hospitals.
Glossary of Terms

COMMON PHARMACEUTICAL/MEDICAL TERMS, DEFINITIONS, AND ACRONYMS

- **API (Active Pharmaceutical Ingredient):** Represents the main ingredient found in a given drug.

- **Atomizer/Nebulizer:** An atomizer is a device that is used to convert any liquid substance into vapor mist or aerosol, while a nebulizer is more specifically applicable to converting a pharmaceutical/medication into a breathable mist for patients.

- **AWP (Average Wholesale Price):** A benchmark that has been used for over 40 years for the pricing and reimbursement of prescription drugs for both government and private payors. Initially, the AWP was intended to represent the average price that wholesalers used to sell medications to providers, such as physicians, pharmacies, and other customers. However, the AWP is not a true representation of actual market prices for either generic or branded drugs. The AWP has often been compared to the “list price” or “sticker price,” meaning it is an elevated drug price that is rarely what is actually paid. The AWP is not a government-regulated figure, and does not include buyer volume discounts or rebates, which are often involved in prescription drug sales.

- **Compounding:** Performed at compounding pharmacies, compounding is the creation of a particular pharmaceutical product to fit the unique needs of a patient. To do this, compounding pharmacists combine or process appropriate ingredients using various tools. This may be done for medically necessary reasons, such as to change the form of the medication from a solid pill into a liquid, to avoid a non-essential ingredient that the patient is allergic to, or to obtain the exact dosage.

- **CPAP (Continuous Positive Airway Pressure):** A CPAP machine is typically utilized for the treatment of obstructive sleep apnea to help patients breathe more easily while sleeping. A CPAP machine increases air pressure in the patient’s throat in order to prevent the airway from collapsing when the patient breathes in.

- **DME (Durable Medical Equipment):** Refers to any medical equipment that is utilized in the home to aid in a better quality of living for the patient. DME includes iron lungs, oxygen tents, nebulizers, catheters, hospital beds, and wheelchairs.

- **Efficacy:** The ability of an intervention to produce the desired beneficial effect in expert hands and under ideal circumstances; specifically for medical purposes, the ability of a drug to produce the desired outcome.

- **Elixir:** A clear liquid containing water, alcohol, sweeteners, or flavors, primarily used as a vehicle for the oral administration of a drug.

- **Emulsion:** A fine dispersion of minute droplets of one liquid in another, in which it is not soluble or miscible.

- **Enteral:** In general medicine enteral nutrition, or drug administration, refers to feeding or administering drugs via the gastrointestinal tract and commonly pertains to tube feedings that may be necessary for certain patients.
Glossary of Terms

COMMON PHARMACEUTICAL/MEDICAL TERMS, DEFINITIONS, AND ACRONYMS (continued)

• **Excipient:** The active ingredient in a drug, which usually represents the substance that is added in a prescription as a diluent, or in order to give form/consistency to a drug when the remedy is given in pill form (i.e. simple syrup, vegetable gums, aromatic powder, honey, and various elixirs).

• **Expiration Date vs. Shelf-Life:** An expiration date is the date up until which a drug manufacturer can guarantee that the medicine is fully potent and safe to take based on product testing. A shelf-life is defined as the time which the average drug characteristic (i.e. potency) actually remains within an approved specification after manufacture. The FDA requires that a shelf-life be indicated on the immediate container label of every drug product.

• **Extract:** A substance, usually a biologically active ingredient, prepared by the use of solvents or evaporation in order to separate the substance from the original material. Extracts may be in liquid or solid form.

• **GPO:** An entity that aids healthcare providers, such as hospitals, ambulatory care facilities, nursing homes, and home healthcare agencies, in realizing savings and efficiencies by aggregating purchasing volume and using that leverage to negotiate discounts with manufacturers, distributors, and other vendors.

• **Indication:** A reason to prescribe a medication or administer treatment. For example, a bacterial infection may be an indication for the prescription of a specific antibiotic, while appendicitis is an indication for an appendectomy.

• **Ostomy:** Refers to the surgically created opening in the body for the disposal of body waste, which is most commonly referred to as colostomy. A colostomy is created when a portion of the colon or the rectum is removed and the remaining colon is brought to the abdominal wall.

• **Solution:** A homogeneous mixture of one or more substances (solute), dispersed molecularly in a sufficient quantity of dissolving medium (solvent).

• **Suspension:** A liquid in which small particles of a solids are dispersed, but not dissolved, and in which the dispersal is maintained by stirring or shaking the mixture. If left standing, the solid particles settle at the bottom of the container.

• **The “Big Three”:** The three largest pharmaceutical distributors (AmerisourceBergen, McKesson, and Cardinal Health), whose collective revenue accounts for nearly 90% of the wholesale pharmaceutical market.

• **WAC (Wholesale Acquisition Cost):** The list price paid by a wholesaler, distributor, or other direct accounts for drugs purchased from the wholesaler’s supplier. The WAC is generally the price issued by the drug manufacturer prior to debates, discounts, allowances, or other price concessions that are offered by the supplier of the product.
GA’s extensive list of healthcare-related appraisal experience includes the following types of companies:

- A manufacturer of respiratory medical products for use in institutional and homecare settings, with products including sleep therapy, pulmonary drug delivery, stationary and portable supplemental oxygen, and homecare suction.
- A specialty pharmaceutical and medical device manufacturer that develops and markets technologies focused on acute and surgical applications.
- A developer and distributor of surgical spinal implants and surgical kits including anterior and posterior cervical, lumbar, and interbody spinal implant systems.
- A manufacturer of disposable medical products including operating room supplies, kits and trays for minor procedures, patient bedside products, containment systems for medical waste and laundry, and measurement and collection products.
- A biomedical equipment rental company whose product line includes respiratory therapy equipment (ventilators, oxygen concentrators), general equipment (beds, stretchers), patient monitoring equipment (fetal monitors, blood pressure monitors), and newborn care equipment (incubators, infant warmers), with customers including hospitals, EMS transport organizations, veterinary clinics, and alternate-site healthcare providers.
- Distributors of non-surgical medical scrubs, lab coats, nurses’ uniforms, and medical shoes.
- A provider of infusion pumps and related products for sales, consignment, and rental.
- A distributor of dental supplies such as consumables including anesthetics, gloves, and disposable trays; large equipment such as dental chairs and x-ray machines; and small equipment such as sterilizers and hand pieces.

Experience

GA has formulated and conducted liquidations for several hospitals including Long Beach Medical Center, Peninsula Hospital Center, Harrison Medical Center, Westchester Medical Center, St. Vincent Catholic Medical Center, Mercy Medical Center, and Franciscan Medical Center, as well as retail pharmacies, including Rite Aid and Drug Emporium, and supermarkets that maintain pharmacies within. GA has also worked with and appraised numerous companies within the healthcare industry. While our clients remain confidential, they include market-leading manufacturers and distributors of pharmaceuticals, durable medical equipment, supplies, devices, and other equipment from medical branches including biomedical, surgical, pharmaceutical, and dental. GA has also appraised national and regional retail pharmacies’ inventory and scripts, and maintains a database of scripts sold over the last five years.
Experience

• A leading provider of home medical equipment, supplies, medication, and services to patients insured through Medicare, Medicaid, insurance providers, and managed care organizations.
• A manufacturer of prescription and OTC specialty therapeutic and diagnostic pharmaceuticals in categories including ophthalmic and injectables.
• Producers of generic pharmaceuticals, which supply to a variety of national pharmacy customers including CVS and Rite Aid, as well as pharmaceutical distributors such as McKesson.
• Regional and independent pharmacy retailers, including those specializing in durable medical equipment, specialty drugs, and holistic medicines.
• Several regional distributors of branded and generic pharmaceuticals.
• A medical company that focuses on the design, development, and commercialization of surgical solutions for the treatment of spinal disorders, with products including spinal implants and related surgical instruments, as well as orthobiologics products.

• A manufacturer and distributor of hearing aids, with products consisting of wireless and digital receiver-in-canal, behind-the-ear, and custom-made hearing aids.
• A global manufacturer and distributor of highly regulated controlled substance APIs for pain management and other applications.
• A medical technology company that focuses on the design, development, and commercialization of surgical solutions for the treatment of spinal disorders in the U.S. and internationally, whose products include spinal implants and surgical instruments, as well as orthobiologics products including demineralized bone matrices, collagen ceramic matrices, allograft bone products, and synthetic beta-tricalcium phosphate synthetic bone void fillers.

In addition to our vast liquidation and appraisal experience, GA maintains contacts within the healthcare industry that we utilize for insight and perspective on recovery values.
Appraisal & Valuation Team

BUSINESS DEVELOPMENT

Mike Marchlik
National Sales & Marketing Director
(818) 917-8175
mmarchlik@greatamerican.com

Ryan Mulcunry
Executive Vice President
Northeast Region, Canada & Europe
(857) 231-1711
rmulcunry@greatamerican.com

David Seiden
Executive Vice President
Southeast Region
(404) 808-8153
dseiden@greatamerican.com

Bill Soncini
Senior Vice President
Midwest Region
(773) 495-4534
bsoncini@greatamerican.com

Jennie Kim
Vice President
Western Region
(818) 974-0602
jkim@greatamerican.com

Daniel J. Williams
Managing Director
New York Region
(908) 251-3580
dwilliams@greatamerican.com

Drew Jakubek
Managing Director
Southwest Region
(214) 455-7081
djakubek@greatamerican.com

Jeffrey W. Christner
Relationship Manager
WI, Pittsburgh, PA
(773) 559-7516
jchristner@greatamerican.com

Bryan Fischer
Relationship Manager
CO, KS, MO, UT
(857) 540-1319
bfischer@greatamerican.com

OPERATIONS

Lester Friedman
Chief Executive Officer
(818) 884-3737
lfriedman@greatamerican.com

John Bankert
President
(781) 429-4054
jbankert@greatamerican.com

David Triompo
Managing Director
(781) 429-4067
dtriompo@greatamerican.com

Paul Arceri
Director
(818) 746-9334
parceri@greatamerican.com

Nicole Hines
Project Manager
(781) 429-4072
nhines@greatamerican.com

ASSET DISPOSITION TEAM

Scott Carpenter
President, GA Retail Solutions
(818) 884-3737
scarperter@greatamerican.com

Adam Alexander
President, GA Global Partners
(818) 884-3737
aalexander@greatamerican.com

GREAT AMERICAN GROUP
A & Riley Financial Company
Great American Group is a leading provider of asset disposition solutions and valuation and appraisal services to a wide range of retail, wholesale, and industrial clients, as well as lenders, capital providers, private equity investors, and professional services firms. In addition to the Healthcare & Pharmacy Monitor, GA also provides clients with industry expertise in the form of monitors for the chemicals and plastics, metals, technology, food, and building products sectors, among many others. For more information, please visit www.greatamerican.com.

Great American Group, LLC is a wholly owned subsidiary of B. Riley Financial, Inc. (NASDAQ: RILY), a diversified provider of collaborative financial and business advisory services through several subsidiaries, including: B. Riley & Co. LLC, a leading investment bank and a FINRA & SIPC member, which provides corporate finance, research, and sales & trading to corporate, institutional and high net worth individual clients; Great American Group, LLC; B. Riley Capital Management, LLC, an SEC registered Investment Advisor, which includes B. Riley Asset Management, a provider of investment products to institutional and high net worth investors, and B. Riley Wealth Management (formerly MK Capital Advisors), a multi-family office practice and wealth management firm focused on the needs of ultrahigh net worth individuals and families; and Great American Capital Partners, a provider of senior secured loans and second lien secured loan facilities to middle market public and private U.S. companies.

B. Riley Financial, Inc. is headquartered in Los Angeles with offices in major financial markets throughout the United States and Europe. For more information on B. Riley Financial, Inc., please visit www.brileyfin.com.