

The Healthcare Supply Chain Top 25 for 2013

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Gartner highlights organizations across the value chain that are focused on reducing supply chain inefficiencies, while improving the quality of healthcare. Leaders are anticipating changing revenue models, and building supply chain capabilities to lower cost and drive better patient outcomes.

Key Findings

- Cardinal Health takes the top spot for the third year in a row, with strong peer and analyst recognition for the breadth of its capabilities across distribution and manufacturing.
- Mayo Clinic, Owens & Minor, Intermountain Healthcare and McKesson round out the top five in a ranking that tightened significantly this year.
- Retail pharmacies surged into the top 10 on recognition of their core supply chain capabilities, increased connection to patient care, global acquisitions and innovative collaboration initiatives.
- Leading health systems continue to innovate in supply chain. Segmentation across the value chain continues to expand, as leaders make trade-offs in cost to serve (CTS) and select sustainable trading partners.
- Manufacturers maintained their strength across all four ranking criteria, but, as a group, lost ground relative to gains in other segments of the industry.

Recommendations

- Follow the patient — and the money. Build strategies with an end-to-end view of supply chain that take changing revenue and multichannel patient care models into account, and adapt your response accordingly.
- Build a five-year vision for supply chain excellence at your organization. Develop an intentional supply chain vision that elevates your role. Incorporate areas from Gartner's healthcare value chain capabilities model to create a sustainable differential advantage, and present for executive buy-in.
- Get serious about collaboration. This is your moment to lead an industry by building end-to-end, integrated relationships with key suppliers and customers.

Table of Contents

Analysis.....	2
Overview.....	2
2013: A Year to Remember.....	3
Inside the Numbers.....	9
The Top Five.....	9
Manufacturing Leaders.....	11
Two Retailers and a Wholesaler.....	13
Health Systems.....	14
Healthcare Value Chain Capabilities.....	16
The Healthcare Supply Chain Top 25 Methodology.....	18
Manufacturers, Distributors and Pharmacies.....	18
Health Systems.....	19
Opinion Component.....	20
Polling Procedure.....	22
Composite Score.....	22
Looking Ahead.....	22
Gartner Recommended Reading.....	23

List of Tables

Table 1. The Healthcare Supply Chain Top 25 for 2013.....	6
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List of Figures

Figure 1. Healthcare Value Chain Capabilities Model.....	17
Figure 2. Peer Opinion Panel Composition: Value Chain Segment.....	20
Figure 3. Peer Opinion Panel Composition: Role.....	21
Figure 4. Peer Opinion Panel Composition: Revenue.....	21

Analysis

Overview

This year marks the five-year anniversary of the Healthcare Supply Chain Top 25 ranking. Modeled on Gartner's global Supply Chain Top 25, the intent of this healthcare-specific ranking is to look

across the connected healthcare value chain and help foster a culture of excellence. While the global ranking evaluates manufacturers, retailers and distributors on criteria required for demand-driven value network (DDVN) excellence, this ranking includes healthcare providers and focuses on the essential capabilities for building an end-to-end, interconnected healthcare value chain. The ranking was, and is, intended to identify beacons of leadership that cast a supply chain light by which other companies can navigate.

Four months after we launched the original ranking, the signing of the Patient Protection and Affordable Care Act signaled an impending shake-up of current healthcare revenue models, affecting virtually every aspect of the healthcare supply chain. Access to care and the means by which it was paid were cast directly into the spotlight. Since then, the core methodology has remained, but with refinements to the organizations included, the segment defined and the quantitative data considered.

Through the development of the healthcare value chain capabilities model, we clarified and aligned the definition of supply chain excellence in healthcare, regardless of where an organization sits in the value chain. The model speaks directly to the issues in the healthcare industry, and embedded patient outcomes into the supply chain discussion in the second year of the ranking.

With the exception of the addition of patient outcomes, during the five years, the themes have not changed greatly. The themes of collaboration and interdependence introduced in the 2009 ranking still ring true. What has changed is the intensity of how companies have tackled the challenges and expanded their supply chain capabilities to adapt to the changes. This is particularly true for providers, since the number represented in this research has expanded from four in the original ranking to 10 this year.

2013: A Year to Remember

In "The Healthcare Supply Chain Top 25 for 2013," we see key themes building from the data, as well as from our interactions with companies. There was movement up and down the ranking that reflected the realities of our times, with consolidation, a renewed emphasis on profitable growth, the impacts of globalization and even a burgeoning focus on patient outcomes taking center stage.

Consolidation happened across the value chain in 2013. The mergers of health systems continued to consolidate the market, with over 100 transactions last year. Baylor Scott & White Health, Vanguard, Catholic Health Initiatives and Ascension Health are examples of organizations that made strategic moves, among many others. Large systems are growing larger through acquisitions of physician practices, individual hospitals and integrated delivery networks (IDNs). Many organizations added complexity to their supply chains, and were challenged by another set of integrations to manage. Distributors and wholesalers in North America made strategic moves to expand their reach into core markets and overseas, and even integrated with key customers, in some cases. To a lesser extent, manufacturers made acquisitions or strategic divestitures (such as Abbott's spinoff of AbbVie) to focus their individual business units and create interesting new companies with a laser focus.

Consolidation is not that uncommon or interesting on its own. What *is* interesting is how central, core supply chain capabilities are determining the winners and losers in the equation. Supply chains are being involved strategically as a critical function to deliver long-range, sustainable growth and profit in a category or market.

The vision for enabling profitable growth through a supply chain became more important in 2013. Increasingly, we are seeing companies with a supply chain vision and solid execution team step ahead of their competitors. In our research into the Healthcare Supply Chain Top 25, the capabilities and initiatives we saw were more far-reaching than ever before, and are creating distance between the Top 25 and other companies. With the unique device identifier (UDI) regulation now set, for example, it is clear that the leading-edge manufacturers that are already far down this path will be able to focus on other areas, such as segmentation and CTS, as well as increase their focus on collaboration efforts. A focus on these broader areas of a supply chain vision allows balance between cost and innovation that drives profit and growth.

A focus on inventory reduction gained support this year. Manufacturers' supply chain organizations are being tasked with taking tens and even hundreds of millions of dollars in inventory out of the network. Medical device companies, in particular, are starting to come to grips with months of field-based inventory. Creative and collaborative partnerships with third-party logistics (3PL) providers and large distributors in beta markets have had early success. The collective goals are aligned, with distributors seeking a new market where they have infrastructure to serve, and with medical device manufacturers realizing all the costs of complexity that are related to bloated inventory levels. Capital is one cost that specifically affects return on assets (ROA), but the bigger cost is in inventory expirations/write-downs, lost revenue and reduced service levels that are not fully accounted for yet.

Top providers have accelerated their supply chain visions again, and the delta between IDNs that are leading and those playing catch-up is widening. 2013 also marks the year that the healthcare value chain began the maturity shift in earnest, moving from transactional operational efficiency to a patient-outcome-centered supply chain. More than ever, leading health system supply chain executives are thinking about the changing revenue models in healthcare and strategizing how supply chain can lead the transformation. Providers are shifting their metrics and structures to motivate supply chain decisions that enable a lower cost for the delivery of care or even care avoidance, instead of just getting lower costs on the physical supplies.

Leading manufacturers are beginning to evolve to an end-to-end perspective. This view aligns across disconnected operating units and supply chains to serve a savvier and consolidating commercial buyer that is seeking data aggressively to make better decisions. The challenge for these manufacturers is to broaden their views of supply chain across the end-to-end value chain from being efficient themselves (inside-out), to making their providers more efficient in delivering care (outside-in) and keeping patients from readmitting to the highest-cost place for care — the acute care hospital. Wrapping services around adherence to care pathways and extending the view of the manufacturer's role in the patient experience are leading the supply chain to serve at different points in the process. Creating end-to-end visibility is already mission-critical to supply chain teams at leading manufacturers, and they are making investments to bridge the gap.

Lastly, the view of the Healthcare Supply Chain Top 25 has primarily been focused on the North American market. The health systems, retailers and distributors had most of their business in North America, and manufacturers had also been able to rely on established markets for most of their growth. However, the past two years have marked an interesting turning point. Slowing growth prospects in North America awakened retail pharmacies, distributors and even health systems to the fact that a sole focus on North America for growth is not prudent when world demographics point to massive growth in a consuming middle class across the world — from 1.9 billion people to 4.9 billion by 2050. This growth will occur in urban population centers, and mostly in growing markets such as China, India, Africa and South America. It is a great opportunity, and one for which leading companies must create strategies that are enabled, in many cases, by supply chain.

The past couple of years have seen more large distributors and wholesalers investing in global growth markets that expand their scope and importance to manufacturers. Likewise, retail pharmacies are vertically integrating their supply chains while positioning themselves as healthcare and wellness providers to their populations of patients/consumers. Providers are waking up as well. Forward-thinking leaders are beginning to pursue innovative global initiatives to leverage supply chain expertise beyond the confines of North America. Strategic sourcing functions now have global reach, and supply chain is expanding its revenue model to capitalize on capabilities that health systems with strengths in sourcing and logistics, as well as standardization expertise, can provide to new markets.

All in all, it has been an amazing five years of change, culminating in interesting developments in 2013, and the Healthcare Supply Chain Top 25 leaders have helped lead the way (see Table 1).

Table 1. The Healthcare Supply Chain Top 25 for 2013

2013 Ranking	Company Name	Three-Year Weighted ROA (2010 to 2012) ¹	One-Year, End-of-Year Inventory Turns (2012) ²	Bond Rating ³	Truven Health System Percentile Score ⁴	Peer Opinion ⁵ (81 voters)	Gartner Opinion ⁵ (21 voters)	Composite Score ^{6A,6B}
1	Cardinal Health	2.8%	11.5	-	-	970	351	8.64
2	Mayo Clinic	-	-	AA	95.00	843	284	8.41
3	Owens & Minor	5.5%	10.5	-	-	823	323	7.97
4	Intermountain Healthcare	-	-	AA+	63.00	848	266	7.84
5	McKesson	4.0%	11.2	-	-	713	192	6.52
6	BD	11.5%	3.0	-	-	659	312	6.50
7	Johnson & Johnson	9.6%	2.9	-	-	893	230	6.35
8	Walgreens	7.7%	7.3	-	-	548	276	6.32
9	CVS Caremark	5.7%	9.4	-	-	565	211	6.03
10	Mercy			AA-	24.00	572	261	5.69
11	Pfizer	6.4%	1.6	-	-	531	333	5.63
12	Kaiser Permanente			A+	91.00	622	120	5.52
13	AmerisourceBergen	4.6%	13.5	-	-	405	157	5.50

14	Novartis	7.7%	2.8	-	-	548	257	5.35
15	Abbott	8.3%	4.0	-	-	620	199	5.34
16	Geisinger Health System	-	-	AA	34.74	580	178	5.28
17	AstraZeneca	14.4%	2.6	-	-	262	263	5.00
18	Advocate Health Care	-	-	AA	98.00	257	83	4.34
19	UPMC	-	-	A+	21.00	556	145	4.23
20	Cleveland Clinic	-	-	AA-	16.00	679	60	3.99
21	Covidien	8.6%	2.8	-	-	556	84	3.98
22	Boston Scientific	-12.2%	2.7	-	-	473	252	3.91
23	GSK	10.1%	2.0	-	-	237	193	3.88
24	Memorial Hermann	-	-	A+	96.00	179	94	3.76
25	Ascension Health	-	-	AA+	74.00	155	87	3.76

Notes:

¹ **ROA:** $((2012 \text{ net income} / 2012 \text{ total assets}) * 50\%) + ((2011 \text{ net income} / 2011 \text{ total assets}) * 30\%) + ((2010 \text{ net income} / 2010 \text{ total assets}) * 20\%)$

² **Inventory Turns:** 2012 cost of goods sold / 2012 inventory

³ **Bond Rating:** All ratings were mapped to the Standard & Poor's (S&P) rating system using an industry-standard mapping system

⁴ **Truven Health System Percentile Score:** Data taken from the Truven Health Analytics 15 Top Health System Percentile Score

⁵ **Peer Opinion and Gartner Opinion:** Based on each panel's forced-rank ordering against the definition of "high-quality patient care at an optimal economic cost"

^{6A} **Composite Score, Health Systems:** $(\text{peer opinion} * 35\%) + (\text{Gartner opinion} * 35\%) + (\text{bond rating} * 15\%) + (\text{Truven ranking} * 15\%)$

^{6B} **Composite Score, Nonhealth Systems:** $(\text{peer opinion} * 30\%) + (\text{Gartner opinion} * 30\%) + (\text{ROA} * 20\%) + (\text{inventory turns} * 20\%)$

2012 data used where available. Where unavailable, latest available full-year data used.

All raw data normalized to a 10-point scale prior to composite calculation.

Source: Gartner (November 2013)

Inside the Numbers

The Top Five

This year's ranking is representative of all the main constituents of the healthcare value chain: manufacturers, providers, distributors and retailers. We consider the healthcare value chain as one that has a singular mission: to drive the highest-quality patient care at the lowest delivered cost. All the constituents are interconnected and interdependent, whether they acknowledge it or not. This year, we look at the top five companies individually, and then review the themes for the three main constituents: manufacturers, retail pharmacies (with a wholesaler) and providers.

Cardinal Health

Cardinal Health "three-peated" this year as the top company in our ranking. It uniquely brings together, under one ownership structure, an expanding global presence and increasing vertical integration in the form of a manufacturer, medical-surgical distributor, international sourcing company, pharmaceutical wholesaler and retail pharmacy, along with myriad other services. This depth deserves and receives a lot of recognition in the value chain. Despite a challenging year, where ROA and inventory turns declined, Cardinal retained the respect of peers and analysts alike, with top votes in both categories. Its collaborative relationship with key customers earns high marks across the value chain, where it can be a one-stop solution to many supply chain challenges faced by organizations that serve patients.

Cardinal's completion of the \$2.1 billion AssuraMed acquisition in March of this year accelerates its expansion to homecare and further aligns it with the needs of its health system customers. This end-to-end view of supply chain across pharmaceutical and medical products is also shifting overseas to China through Cardinal's many acquisitions in the country. This gives it a strategic advantage, with manufacturers seeking an improved global strategy in hard-to-serve markets.

The loss of the \$25 billion Walgreens business unfolded in 2013. This key customer loss impacts top-line revenue, but may actually improve ROA over the long run.

Mayo Clinic

Mayo Clinic is our highest-ranked health system for the second year in a row, significantly closing the gap between itself and Cardinal Health. Mayo received strong peer and analyst support, along with quality-of-care and bond-rating scores that were near the top. It earned these ratings through a disciplined approach to supply chain that positions it as an orchestrator of internal and external functions.

Mayo serves multiple markets across the country through strong governance, talent management and metrics discipline. It has partnered effectively with many IDNs in adjacent markets to leverage this value into a revenue stream for its supply chain group through its sourcing work for the Upper Midwest Consolidated Services Center. The larger benefit of this effort is increased leverage with select suppliers, with an average 12% savings over the baseline group purchasing organization (GPO) contracts for Mayo and the IDNs with which it collaborates.

Mayo's tool chest in supply chain runs deep. As a leader on multiple fronts, it has depth in diverse areas such as sustainability, data standards, risk management and patient outcomes. The way Mayo is looking at procedure-based, end-to-end profitability in working with suppliers is on the leading edge of innovation and transparency.

Owens & Minor

After spending the past two years at No. 5, Owens & Minor jumps up two spots. It joins Cardinal Health as one of only two companies to make the top five in all five years of the ranking. Owens & Minor rose predominantly on better recognition by peers and analysts, plus improved inventory turns, from 9.6 to 10.5 year over year.

Already well-recognized among health systems and manufacturers alike for its leadership, Owens & Minor has been building a market strategy to expand its existing market in North America and to branch overseas. In North America, it has listened effectively to its provider customers to build new partnership models through the Leadership Education Accelerated Development (LEAD) program. In parallel, Owens & Minor has developed multiple medical device, integrated 3PL models that leverage its national and regional logistics capabilities to improve service and supply chain efficiencies across the value chain. Overseas, it has moved from its North America-landlocked status to become an established European player through the acquisition of Movianto. This positions Owens & Minor with a distribution footprint capable of providing two-hour service to 74% of the current global healthcare spend.

Intermountain Healthcare

Holding steady in the No. 4 spot, but closing the gap on the leaders, is Intermountain Healthcare. The Intermountain team has worked hard to deliver on the investment made in its supply chain by its board. With the \$40 million, 357,000-square-foot supply chain center in full operation, Intermountain has become a flagship of professionalism to the suppliers with which it works.

Its development of a strategic sourcing team that is specifically challenged to find millions in non-price-related savings has made Intermountain think and act differently. It has continued executive support, and the organization's commitment to enabling low-cost and high-quality patient care throughout its supply chain is strong.

Intermountain's heritage of serving the health of Utah's population caused it to uniquely keep supply chain capabilities on the homecare side of its business as well. This homecare supply chain will serve Intermountain well as revenue models change, and as the ability to effectively follow and serve the patient at the lowest possible cost location becomes even more important. Likewise, a new burning platform for patient-connected savings is its commitment (made to its owned payer, SelectHealth) to keep total costs below the consumer price index plus 1%.

McKesson

McKesson is back in the top five for the first time since 2009. It has always been in the Healthcare Supply Chain Top 25, and rose this year on solid ROA, great inventory turns and an improved peer ranking. McKesson has historically earned respect from its customers for a commitment to

continual improvement of service, and it benefits from being a known entity across many of the constituents that vote in the Healthcare Supply Chain Top 25; manufacturers, distributors, retailers and providers alike know McKesson on some level.

It has also made strides in recent years to bolster its strength in serving key markets. The acquisition and integration of PSS World Medical in the medical office space vaults it into a market-leading spot, and its moves toward the customer in the specialty pharmaceutical space have taken root.

McKesson has shown discipline and skill in making and integrating these acquisitions. We expect its late-2013 acquisition of Celesio, a \$30 billion distributor, to bring the same kind of focus to its expansion into Europe.

Manufacturing Leaders

This was a challenging year for life science manufacturers in the ranking. Seven of last year's Healthcare Supply Chain Top 25 manufacturers fell in this year's ranking, while only three maintained or improved their positions. The manufacturer's comparative position suffered as wholesalers, distributors and retailers took a larger share of the top 10 positions.

Supply chain executives at manufacturers are being asked to walk a fine line: ensuring reliable and compliant supply, while simultaneously controlling costs and generating cash to fund investments in growth opportunities. Ensuring patient supply takes precedence, but, unfortunately, many manufacturers put excellence in planning and inventory management on hold to deal with it with sometime later (see "Life Science Manufacturers Are Too Comfortable With Lagging Inventory Management Practices"). As a result, little progress has been made in improving inventory performance, with pharmaceutical, biotech and medical device manufacturers achieving inventory turn performance only in the 2.0 to 2.4 range, which is on par with levels over the past decade.

Many of the manufacturers in this study also experienced a significant decrease in the three-year weighted average ROA versus our 2012 study. With pressure mounting to reduce healthcare costs, and the continuing effects of the "patent cliff" impacting many global pharmaceutical companies, top-line growth for many manufacturers was elusive, constraining the metric. For many manufacturers in our ranking, relatively strong ROA performance this year was still lower than levels reached in previous years.

Manufacturers that rose in our ranking are capitalizing on foundational investments in global supply chain processes and organizations, in addition to supply reliability, and extending their capabilities downstream to distributors, patients, providers and markets. The ones that dropped in the ranking are primarily pharmaceutical manufacturers dealing with major losses of exclusivity (LOEs). Others that dropped are distracted by persistent quality and compliance issues and disruptions, and several suffered simply by maintaining their levels of performance, while other organizations improved their relative positions.

This year's list of the top manufacturers contains many repeat leaders and two new entrants:

- BD (No. 6) maintained its leadership position among manufacturers for the third consecutive year. While slipping a few spots in the ranking, the medical technology company continues to earn enormous recognition from peers and analysts, as well as from its health system customers. The credit stems from BD's leadership in initiatives that reach across the value chain to distributors, providers and other manufacturers. For example, BD's collaboration with Mercy to leverage data standards down to the patient bedside demonstrated significant potential to streamline activities across the value chain and improve care. In addition, strengths in core supply chain capabilities are enabling and accelerating BD's growth into new market segments, including its recent entry into sterile injectables. Internally, BD also continues to advance its supply chain organization and talent, and to strengthen alignment across the enterprise.
- Johnson & Johnson maintained its position at No. 7, with the highest level of peer recognition for a manufacturer in this year's ranking. Its truly global focus, and industry-leading initiatives to segment, prioritize, and connect with customers, are designed to gather customer insights and make the company easier to do business with. In addition, Johnson & Johnson is beginning to leverage its recent work of transitioning to a single, enterprisewide supply chain to enhance the customer experience and drive efficiencies. Although the organization's performance slipped in financial metrics, with it actively addressing persistent quality and compliance concerns, this industry leader continues to pursue new approaches aimed at managing supply risks, and becoming more customer- and patient-focused.
- Pfizer scored one of the only gains by manufacturers in this year's ranking, rising two positions to No. 11. The increase is enviable, considering the loss of patent protection on Lipitor and several other major revenue-generating drugs over the past few years, which placed considerable pressure on the company's top line. Despite this, Pfizer improved its three-year ROA performance by rationalizing and reconfiguring its global supply network for agile supply capabilities. It received substantially more recognition this year from both peer groups, due to establishing truly global supply chain capabilities and differentiated supply models in markets all over the world. Pfizer is ahead of many peers in focusing on patients, as well as on providing the capabilities to meet increasingly complex and varying needs around the globe.
- Novartis (No. 14) continues to place well on the strength of growing peer recognition for exceptional work on sales and operations planning (S&OP) and demand-planning processes; operational excellence initiatives, which reduced days of inventory on hand on key brands by close to one-third; and a broadening focus on patients and markets. However, with weakening financial metrics, and the supply disruptions that resulted from quality and compliance issues across several business units, Novartis slipped out of the top 10 this year.
- Abbott (No. 15) held on to a solid position in the ranking by taking a leadership role in initiatives that are critical to the healthcare value chain. The pharmaceutical business is scaling its Pharmacy Services offerings, providing high-touch services directly to physicians and patients to improve patient care and the outcomes associated with its blockbuster biologic, Humira. Abbott also continues to earn praise for its pilot of network-centric track and trace, working with McKesson, GHX and the U.S. Department of Veterans Affairs (VA). The diversified healthcare business is progressing on customer and supply chain segmentation initiatives, and has strengthened internal business processes in areas such as S&OP. Abbott spun off AbbVie, its

proprietary pharmaceuticals business, in 2013, but reported financials as a combined entity. For 2014, they will be distinct and separate entities in the ranking process.

A pair of global pharmaceutical majors and two medical device leaders make up the balance of the manufacturers in our ranking:

- AstraZeneca moved up one position to No. 17, despite severe, top-line revenue pressures from LOE. The U.K. leader has committed to a new vision to guide the next stage of its supply chain transformation, which is intended not only to reduce costs further, but also support the company's quest for growth from existing products, emerging markets and biologics.
- Covidien and Boston Scientific earned spots No. 21 and No. 22, respectively. Both are recognized for innovative provider relationships, which deliver joint value and strengths in internal operational execution. Additionally, Covidien has made great strides in deploying GS1 standards and in steadily improving three-year ROA. Challenged with deteriorating financial performance throughout last year, Boston Scientific maintained a position in the Healthcare Supply Chain Top 25 because it was recognized by Gartner analysts for excellence in operations and execution, and for its strong, collaborative culture between the commercial and supply chain functions.
- GSK (No. 23) climbed back into our ranking this year, based on efforts to refocus on end-to-end supply chain management from the patient back and the CEO down. In addition, with patent-loss issues largely behind the company, financials have stabilized, and attention has turned to commercializing its high-potential pipeline and becoming more market-focused in its healthcare businesses.

Pharmaceutical and biologics manufacturers face several more years of substantial LOE issues, and medical device companies will be increasingly affected by cost pressures from global healthcare reform. Even so, manufacturing supply chain leaders continue to advance their adoption of demand-driven and patient-focused capabilities to support top-line and bottom-line performances.

Two Retailers and a Wholesaler

Retailers took a collective leap forward in our ranking this year, cracking the top 10 for the first time since 2009. We are highlighting one wholesaler in this group, since its story for 2013 is tied to a collaboration with a retail pharmacy that is one of the most creative we have seen.

In general, retail pharmacies are being recognized for taking a bigger role in the healthcare value chain in recent years. With the advent of accountable care organizations (ACOs), the focus on bringing patient care to nonacute locations, and the focus on the adherence of medications in maintaining and improving a population's health, have risen in importance. Retail pharmacies have built models that look more like population health management than pure retail. Compound this with a respect among healthcare constituents for the maturity of the retail industry in supply chain, and there is upward movement in the group.

Walgreens moved into the No. 8 spot on our ranking, up from No. 21 and jumping ahead of rival CVS Caremark for the first time, courtesy of a couple of bold moves over the past two years.

Walgreens' solid three-year weighted ROA at 7.7% and midrange inventory turns at 7.3 set a great foundation for a significant uptick in peer and analyst recognition. Its position as a retailer with commensurate supply chain capabilities, its focus on the "voice of the customer" and the 400 clinics across its locations give Walgreens a healthcare supply chain platform to be envied. Its offering of chronic disease management and development of ACOs further blur the lines between retailer and provider. Walgreens acquisition of Alliance Boots has given the Healthcare Supply Chain Top 25 voters something else to watch, as the execution of a more global strategy starts to take form. On top of all this, Walgreen's innovative and collaborative ownership structure of its deal with AmerisourceBergen surprised people in its boldness and reach. This move toward an integrated supply chain gives Walgreens improved costs and alignment with AmerisourceBergen by way of an ownership stake. Our value in healthcare model directs voters to look for and reward industry collaboration, and this is a perfect example.

AmerisourceBergen's (No. 13) 2013 story is hard to untangle from its 19 March announcement of a long-term, strategic relationship with Walgreens. It is the most consistent company in the history of the Healthcare Supply Chain Top 25 ranking, placing at either No. 12 or No. 13 in every year of the study. After selling off its contract packaging and other noncore businesses, AmerisourceBergen is sharpening its focus on drug distribution. Through the Walgreens partnership and key supply chain moves, such as last year's World Courier acquisition, it is on track to grow and extend these core competencies globally. These examples of value chain collaboration in support of focused growth were noticed by the analyst community, keeping AmerisourceBergen in its spot on the ranking.

CVS Caremark comes in at No. 9 this year, eclipsed by the innovative movement of Walgreens, but still jumping eight spots in its own right. At 5.7%, ROA ran ahead of last year, and inventory turns moved up to a distributorlike 9.4, which, along with solid peer and analyst recognition, elevates CVS Caremark. CVS Caremark is the largest pharmacy retailer in the U.S. at 22% of total prescriptions filled in 68,000 locations. Its partnership with local health systems, and its focus on population health through adherence programs and 650 Minute Clinics, make it one to watch in the domestic U.S. market, while select acquisitions over the past year indicate its intention to move into Latin America and other regions.

Health Systems

The top-ranked healthcare providers have evolved more than any other group in the past five years. In contrast, the mid- and lower-end health systems have the farthest to go in building supply chain maturity. The Healthcare Supply Chain Top 25 seeks leaders, however, and not the average health system. Considering that, even with consolidation, there are still 280 health systems, and the challenge of making the Healthcare Supply Chain Top 25 across industry is daunting. Yet, at the top, there are leaders showing the way and paving a new trail.

In the early years of the ranking, some thought that an equilibrium would form, but it is clear through our process of information gathering and voting that the leaders are accelerating, with distance growing between those building advanced capabilities and those waiting to be shown the way. Consolidation, investment and competition have driven leaders to push new boundaries — sometimes literally, forging new paths where none existed in revenue generation, logistics and capabilities, along with clinical and financial analysis.

The alphabet soup of "ACA," "ACO," "UDI" and "CQO" was a distant thought when we implemented the ranking in 2009. Many providers, such as the following, took the burning platform and built new capabilities.

At No. 10, Mercy is an innovator and a pioneer. It has been in the top 10 of our ranking every year since 2009, and continues to lead the way in many areas of supply chain excellence at health systems. Its supply chain group is so strong internally that it has effectively branded its supply chain group as "ROi," and has been on a four-year journey to market its supply chain services beyond its system. Although Mercy continues to receive strong peer and analyst recognition, as a system, it has struggled in the quantitative areas of our study for bond-rating and quality-of-care scores. It continues, however, to show significant supply chain innovation led by internal talent and investment. Branching into new services through ROi that go way beyond traditional capabilities is a hallmark of Mercy. Innovations expanded last year to supply chain services such as centralized capital equipment rental, operating-room supply chain leadership, sales and service models for spinal implants, and continued expansion of its commercial footprint with partner/owners.

Kaiser Permanente (No. 12) has always had great peer recognition, and has been in the ranking at No. 25 the past two years, despite some lower quantitative scores. Its jump this year reflects a significant uptick in quality-of-care scores to one of the highest levels, and growing peer support is reflective of its continued industry leadership as part of the Healthcare Transformation Group (HTG), along with Mercy, Intermountain Healthcare, Geisinger Health System and Mayo Clinic. Kaiser has always received high marks for its connectivity of care from the outside-in, or patient-back, through the supply chain. Its access to information for decision making and connection to clinical are front and center to its strategy, and it has had some early success in real demand planning from the point of patient care. Historically, Kaiser has struggled to act in concert as one entity across all its diverse regional markets, but that is changing. Pockets of supply chain excellence, such as its four-hospital supply chain transformation project, will be shared across the organization in the coming years. Early returns showed a 30% improvement in service, while costs were reduced 20% in a high-spend area.

Geisinger Health System (No. 16) dropped a few spots this year, mostly tied to a quality-of-care score that declined significantly year over year. Geisinger has been on our ranking since 2010, typically scoring high in the area of patient care. Geisinger's focus on the integration of supply chain into the fabric of its organization through its innovative Elite and LEAP programs that look to outcomes is a model for others to follow. It knows the power of communicating the value of supply chain across the organization and does it well. Long a leader in thinking about new revenue models and the impact to supply chain, the peers and analysts recognized this, and have rewarded Geisinger's behavior. Its OR inventory redesign pilot yielded significant results and demonstrated the value of service that is historically absent from the cost-centered initiatives that supply chain implements.

Advocate Health Care (No. 18), UPMC (No. 19) and Cleveland Clinic (No. 20) reflect the value of shining a light on what good looks like in the healthcare value chain. All three are large systems with different areas of strength, strategy and focus. Advocate entered the list in 2012 for the first time, and has continued to climb up a few notches, based on continued excellence in patient care and bond-rating scores, along with a growing recognition that it is committed to building innovation into

its supply chain. A collaborative partnership with Owens & Minor; an early, integrated, cross-system logistics network; and an early focus on connecting patient outcomes to supply chain have put Advocate on the map, even though it is not a "household" name in healthcare. Its ownership and early involvement with SharedClarity, an organization bridging the gap between care and cost, allows Advocate to place a primary focus on enabling better patient outcomes through its supply chain.

UPMC is an impressive supply chain operation, with deep talent from outside and inside the industry working to innovate in many ways. It uniquely disintermediates its pharmacy wholesaler and GPO, taking out \$75 million in costs from the system. UPMC's deep value analysis capabilities, revenue-generating reach and segmented supply chain thinking are the most mature in the country, and it is always thinking about new revenue models and how to adapt in its hypercompetitive market. In UPMC's case, quality-of-care scores took it a bit down in the ranking.

Cleveland Clinic has a strong supply chain group as well. Its healthcare brand name and known leadership in many areas of supply chain help put it on the ranking through strong peer recognition, even with lower quantitative scores across the board. Cleveland Clinic collaborated with a new GPO partner in 2013 to create a joint venture to build analytics tied to care in core areas, especially surgery. Whether this acute care, procedure-oriented focus for supply chain works seamlessly is unclear, but the focus on this type of analytics across a system is the future of supply chain.

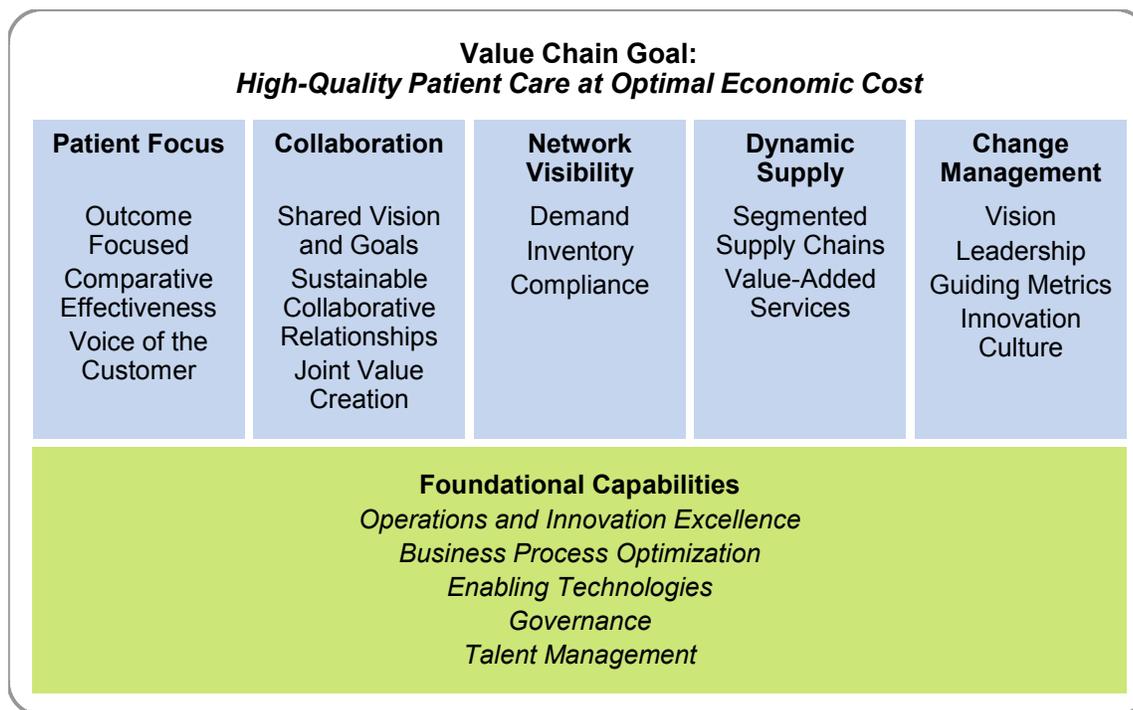
Rounding out the Healthcare Supply Chain Top 25 are Memorial Hermann (No. 24) and Ascension Health (No. 25), and they are about as different as you can get, aside from the fact that, to date, both are not very public in sharing their capabilities across the industry. Memorial Hermann debuted last year on the ranking, and is a highly respected regional health system that has built a strong system of governance; a patient-connected, supply chain cost position; and a collaborative environment, with trusted supplier and service partners. On top of this, Memorial Hermann delivers the highest-ranked care in our study, and has seemingly embraced new revenue models, such as ACOs, more than most.

Ascension Health is new to our ranking, and has one of the largest scopes of any system that made the Healthcare Supply Chain Top 25. Growing aggressively through mergers and acquisitions, with an estimated \$20 billion in revenue for 2013 across 21 states, describes this expanding Catholic system. Strength in patient care, and solid peer and analyst support, put Ascension on the Healthcare Supply Chain Top 25 map. Its agreements with large service organizations show an ability to collaborate and share risk. An internal culture of sharing and leveraging best practices seems to be in operation at Ascension Health, and it has its hands full of opportunities to share and learn internally as it grows.

Healthcare Value Chain Capabilities

For "The Healthcare Supply Chain Top 25 for 2013," we continued to utilize our model for value in healthcare as a key component in the subjective evaluation of organizations. This model is used to guide peer and analyst voters as they consider companies to select for the ranking. Our model is designed to highlight activities in the healthcare value chain that enable high-quality patient care at optimal cost, driven by the core set of capabilities described in Figure 1.

Figure 1. Healthcare Value Chain Capabilities Model



Source: Gartner (November 2013)

- **Patient focus** — A patient-back supply chain strategy focused on market accessibility, patient outcomes, care quality and cost impacts all intraorganizational and interorganizational functions, from product development to partner collaboration.
- **Collaboration** — Trading partners must enter into sustainable, collaborative relationships with a shared vision and transparent set of mutual goals to create win-win improvements that influence the entire value chain.
- **Network visibility** — Trading partners must create bidirectional visibility to key information, such as inventory, demand, compliance, outcomes and cost.
- **Dynamic supply** — Because high-quality outcomes aren't static targets, all organizations must create agile, value-added supply chain responses tailored to multiple customer and channel segments.
- **Change management** — Value in healthcare is a long-term quest, and organizations must have the vision, strategy, execution discipline and strong governance to sustain change in the face of ingrained beliefs and process habits.
- **Foundational excellence** — To drive toward higher-level capabilities, organizations need to focus on the basics, and optimize their operational excellence and business process harmonization initiatives. Moreover, they need to ensure that their systems are capable of supplying credible data on which to implement higher-level capabilities that affect outcomes

and costs. Developing future supply chain talent requirements is important at the foundational layer as well.

The organizations that received the most recognition using this model have established either a strong and credible foundation, an innovative vision for future success, or are already pursuing and realizing benefits from joint initiatives with trading partners. Although our model cannot ensure success in execution, the industry overall recognizes that the path toward a future healthcare system, one that is cost efficient and focused on patient outcomes, is based on the principles captured in our model. Wherever a company sits in the value chain, and wherever one falls on this year's ranking, this model can be used to frame and set parameters to supply chain strategic goals. At the same time, leaders must develop the skill sets most conducive to executing against initiatives that involve an end-to-end understanding of processes and culturally ingrain a patient-back perspective within their company.

The Healthcare Supply Chain Top 25 Methodology

Consistent with our Supply Chain Top 25 research methodologies, the Healthcare Supply Chain Top 25 ranking is derived from two main analyses: quantitative measures and opinion. Quantitative measures provide a view into how companies have performed in the past, and establish proxy connections between financial health, performance and supply chain excellence. The opinion component offers an eye to value chain leadership and demonstrated supply chain performance — crucial characteristics of our Supply Chain Top 25 ranking. These two components are combined into a total composite score.

Health systems have vastly different operating models. Access to common, public financial data is not easily captured, compared to publicly traded manufacturers, distributors and pharmacies. Therefore, we utilized different assessment methodologies for these two major segments of the healthcare value chain.

Manufacturers, Distributors and Pharmacies

The first step in our Healthcare Supply Chain Top 25 methodology was to identify a population of companies to include in the analysis. Consistent with prior years, we derived a 2013 master list of manufacturers, distributors/wholesalers and retail pharmacies from a combination of sources. Compared to the methodology for our global, cross-industry Supply Chain Top 25, we decreased the annual revenue thresholds required for inclusion to ensure that we cast as wide a net as possible. However, one factor remained constant: To be included on the Healthcare Supply Chain Top 25, all companies must publish audited financials specific to a healthcare business.

The second step in our methodology was to determine the quantitative measures to utilize in our analysis. Consistent with prior years, we utilized ROA and inventory turns for operating and supply chain effectiveness, respectively. Publicly available, audited financial data was collected for each company for the years 2010 through 2012. This data was used to calculate a three-year weighted average for ROA and a 2012 end-of-year measure of inventory turns.

The third step in our methodology was to determine the weighting applied to the quantitative measures versus the opinion score. We strongly believe that the collective "wisdom of the

healthcare crowd" points the way to supply chain excellence and successful trading-partner collaboration. We also believe that repeated, bidirectional and genuine collaboration between trading partners is a crucial ingredient to achieving value in healthcare. So, consistent with last year's methodology, we applied a 40% weighting to the quantitative measures and a 60% weighting to the opinion score.

Health Systems

Our methodology used to select and rank health systems has remained consistent with our process last year. We openly discuss this methodology with key executives from health systems, and the majority of these executives support this methodology, which has allowed us to keep the primary components in place for 2013. As we have the past four years, we partnered with Truven Health Analytics (formerly the healthcare business of Thomson Reuters) on two components of the process: to determine a meaningful group of health systems to analyze, and to determine a proxy for quality-of-care scores for the health systems.

Our list of eligible health systems was developed based on two factors. Since there are approximately 280 health systems in the U.S., we chose to down-select health systems, utilizing one main criterion consistent with our overarching goal for the healthcare supply chain: quality of patient care. We also decided to utilize only the systems in the midsize and large categories of Truven Health's study to be eligible, which is consistent with how we have a revenue threshold size for manufacturers, distributors and retailers.

Truven Health has collected quantifiable public data in 10 key areas of patient care for the last 20 years. The results are published in its 15 Top Health Systems report on patient care, which is part of its 100 Top Hospitals program. This percentile score is based on publicly available data across 10 measurements of patient care performance, including mortality, complications, patient safety, core measures, 30-day patient readmits, 30-day mortality, average length of stay (ALOS), expense, operating profit margin, and Hospital Consumer Assessment of Healthcare Providers and Systems (HCAHPS).

As previously mentioned, we used the Truven Health report for two purposes. First, we used its Top 2 Quintiles list of health systems that have \$750 million or more in revenue as the base population eligible for our ranking. To be consistent with our previous Healthcare Supply Chain Top 25 rankings, we added in eight systems that scored high in the peer and analyst voting during "The Healthcare Supply Chain Top 25 for 2012." Second, we used the percentile score from the 15 Top Health Systems report from Truven Health to develop a force-ranked score for the quality of patient care for each hospital system.

As we did last year, we chose bond rating as a proxy for operational efficiency at the health system level. Although a bond rating is not a perfect proxy of operational efficiency, it does reflect the financial discipline and management effectiveness of a health system. We used ratings from S&P, Moody's and Fitch to develop an aggregate bond-rating composite score. For consistency purposes, we mapped all bond ratings to the S&P scale, which is reflected in Table 1.

The last step in our health system methodology was to decide how to balance our quantitative measures and opinion scores. To maintain consistency with last year's methodology, we applied a 30% weighting to the quantitative measures and a 70% weighting to the opinion score. Here, once again, the wisdom of the collective healthcare crowd should prevail.

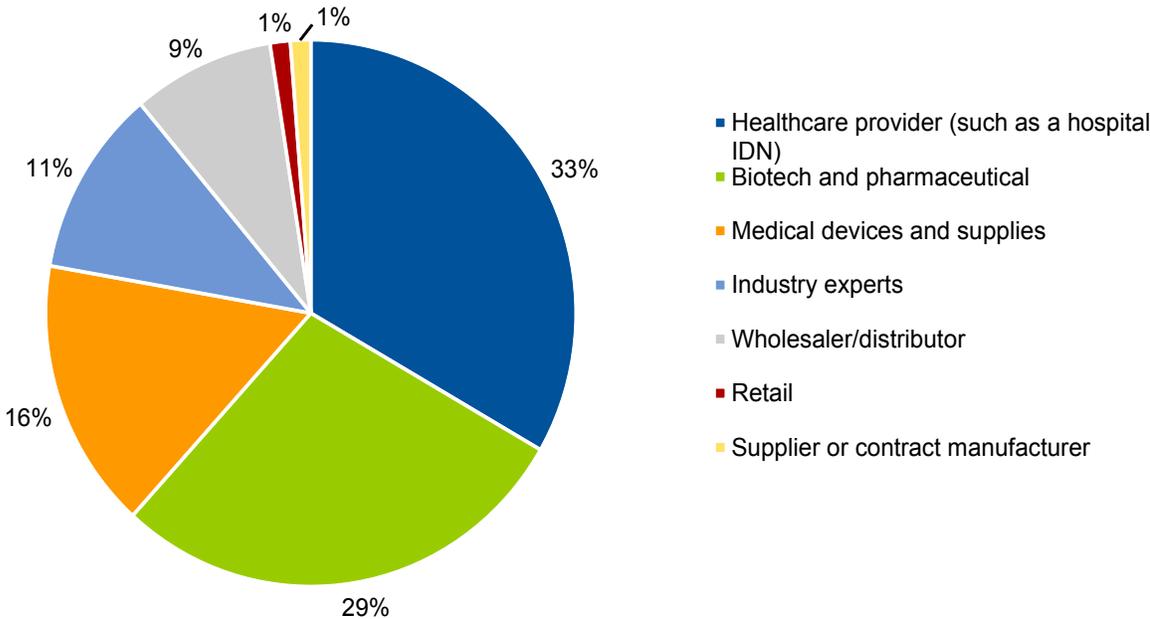
Opinion Component

The goal of the opinion component is to draw on the extensive knowledge of the professionals who interact and have direct experience with the organizations being ranked. Any supply chain leader from a manufacturer, distributor, pharmacy or health system is eligible to vote. However, only one vote is accepted per company.

This year, we received peer votes from 81 supply chain leaders — an approximate 16% increase over last year. Voters came from the most senior levels of supply chain organizations from across the value chain. The voting composition is consistent with the representation from the different segments in the value chain overall. This year, we had 37 voters from the manufacturing sectors and 27 from healthcare providers. The other 17 votes came from distributors, retailers and healthcare-industry experts.

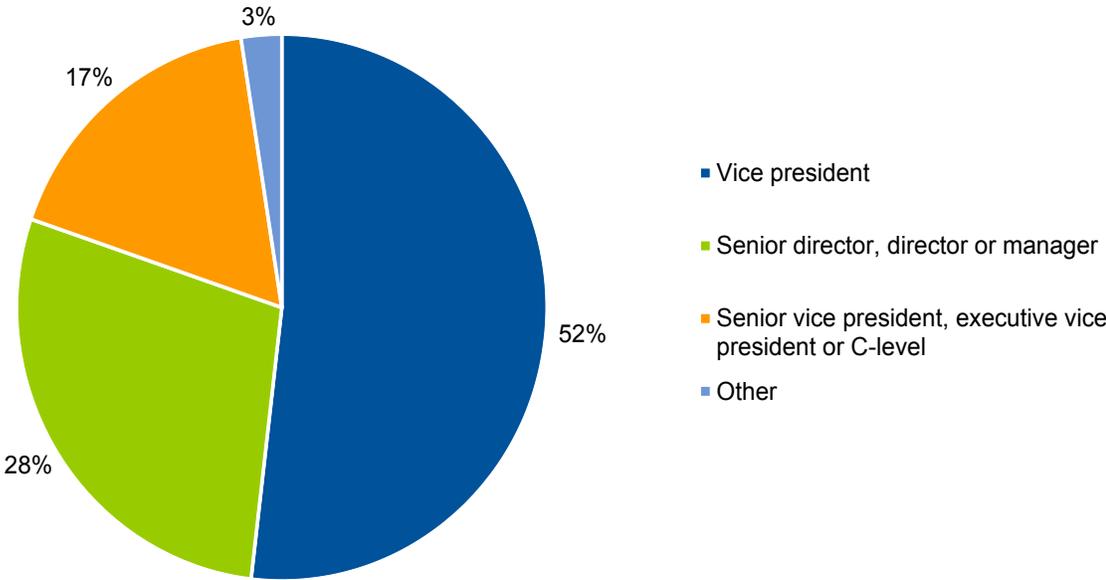
Twenty-one Gartner analysts, representing various industry and functional specialties, cast analyst opinion votes as well. Each of these analysts drew on his or her primary field research and work with healthcare value chain companies when casting a vote.

Figure 2. Peer Opinion Panel Composition: Value Chain Segment



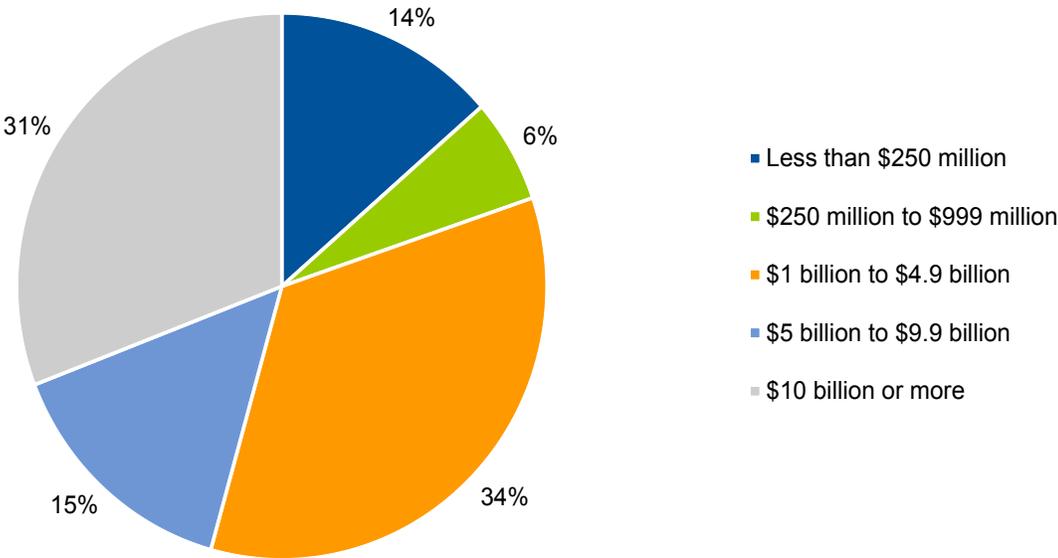
Source: Gartner (November 2013)

Figure 3. Peer Opinion Panel Composition: Role



Source: Gartner (November 2013)

Figure 4. Peer Opinion Panel Composition: Revenue



Source: Gartner (November 2013)

Polling Procedure

Peer panel polling was conducted during September 2013 via a Web-based, structured voting process. Voters were taken through a four-page system to identify their final selection of leaders.

Here's a breakdown of the four-page system:

- The first page provided instructions and a description of our model for value in healthcare. Specifically, voters were asked to consider the following:
 - Which organizations are developing and implementing strategies to support the delivery of high-quality patient care at optimal costs?
 - Which organizations are building and implementing supply chain capabilities in the areas depicted in our healthcare value chain capabilities model?
- The second page solicited demographic information from voters.
- The third page provided panelists with a complete list of the organizations to be considered. We asked them to choose 30 to 50 that, in their opinion, most closely achieved the ideal of value in healthcare.
- After the subset of leaders was chosen, the panelists were then asked to force-rank the companies from No. 1 to No. 25.

Individual votes were tallied across the entire panel, with 25 points earned for a No. 1 ranking, 24 points for a No. 2 ranking and so on. The analyst panel and peer panel used the exact same polling procedure.

By definition, each person's expertise is deep in some areas and limited in others. Despite that, voters weren't expected to conduct external research to place their votes. The polling system is designed to accommodate differences in knowledge, relying on what author James Surowiecki calls the "wisdom of crowds" to provide the mechanism that taps into each person's core kernel of knowledge and aggregates it into a larger whole.

Composite Score

All this information — that is, the quantitative measures and opinion votes — is normalized onto a 10-point scale and aggregated using the aforementioned weighting into a total composite score. The composite scores are then sorted in descending order to arrive at the final Healthcare Supply Chain Top 25 ranking.

Looking Ahead

Change is a constant in the healthcare value chain, and we expect more of it in the next five years. Our goal in producing a Healthcare Supply Chain Top 25 ranking is to provide a platform where industry leaders are recognized for the collaborative improvements they are making and the innovative capabilities they are pursuing to move the industry in a new and positive direction. The focus on building fundamental capabilities referenced in this report, including the ability to correlate supply chain cost and service data, patient outcomes, and quality data, and on adapting to

changing revenue models will take center stage. It is clear that the access to and management of data will increase in importance, enabling enhanced, operational supply chain capabilities. It is also clear that supply chain will be at the center of the discussion, bringing together organizational silos no matter where they sit in the supply chain. Organizations that embrace supply chain as an enabler of profitable growth will thrive, and we expect the difference between the "haves" and "have nots" to widen in this area, increasing the likelihood for consolidation. We applaud the companies on this year's Healthcare Supply Chain Top 25, and look forward to the next five years of innovation in supply chain.

Gartner Recommended Reading

Some documents may not be available as part of your current Gartner subscription.

"The Healthcare Supply Chain Top 25 for 2012"

"Healthcare Provider Supply Chain Outlook, 2013"

"Life Science Manufacturers Are Too Comfortable With Lagging Inventory Management Practices"

"SharedClarity Makes Patient Outcomes a Focus of the Healthcare Supply Chain"

"Supply Chain Outlook for Life Science Manufacturers, 2013"

"BD Benefits From Data Standards Adoption in Healthcare"

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