

Healthcare Systems and Services Practice

Trends disrupting pharmacy value pools and potential implications for the value chain

Alex Sozdatelev, Suhail Acharya, Megan Colwell, and Shubham Singhal



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Changes in the pharmacy industry are altering the value pools and basis of competition within it. Three moves can help players respond successfully to these changes.

The US pharmacy industry is in a state of flux, as evidenced by recent news related to potential acquisitions,¹ pharmacy store closures,² shifts in strategic partnerships among major health insurers and pharmacy benefit managers (PBMs),^{3,4} and the potential entry of Amazon.⁵ This stream of news brings into sharper focus underlying changes in the pharmacy industry that have been occurring over the past two to three years—changes that are altering distribution of the industry's profit pools as well as the basis of competitive advantage within it.

We believe three imperatives exist for players considering how they can best address these changes and remain relevant:

Imperative 1

Pursue business models that deliver a lower total cost of care for consumers and employers.

Imperative 2

Leverage data aggregation and big data analytics to generate insights and create value, as players in other industries have done.

Imperative 3

Put the consumer in the center, and be innovative in bringing more consumer insights-driven solutions and actions into your business.

Key factors affecting the industry

Several important trends are reshaping the pharmacy industry. Some are macro trends affecting all players. Others are segment-specific trends that affect large parts of the value chain but have a greater impact on some players than others. In addition, the possible entry of Amazon into prescription drug sales could significantly disrupt the industry.

Macro trends

Increasing drug spend. For employers and employees, private payers, and state and federal governments, increasing drug spend has led to greater scrutiny and pressure to manage this trend. The increases have been particularly driven by growth in the use of specialty drugs, which are expected to account for about 40% of total drug spend by 2020 (compared with about 27% currently).⁶

Rising consumerism and growing out-of-pocket (OOP) payments. The need for transparency has grown because of these factors. OOP payments have been increasing rapidly as more health plans include high deductibles and/or co-insurance levels or, in some cases, completely exclude coverage for select specialty drugs. Our estimates (based on both the insured and uninsured

**Alex Sozdatelev,
Suhail Acharya,
Megan Colwell,
and Shubham
Singhal**

¹Humer D, O'Donnell D. CVS bid for Aetna: A \$66 billion bet on cutting drug costs. *Business News*. October 29, 2017.

²Tuttle B. Is your drugstore closing? Pharmacy giant to close 600 Walgreens, Rite Aid stores. *Yahoo Finance*. October 26, 2017.

³Flanagan C, Rausch N. Anthem breaks with Express Scripts, will start own drug plan. *Bloomberg*. October 18, 2017.

⁴Japsen B. Anthem partners with CVS to launch new PBM. *Forbes*. October 18, 2017.

⁵Langreth R, Soper S. Amazon looms over pharmacy chains as analysts see market entry. *Bloomberg*. October 6, 2017.

⁶Fein AJ. 2017 *Economic Report on US Pharmacies and Pharmacy Benefit Managers*. February 2017.

populations) suggest that OOP payments account for about 14% of total drug spend (this estimate includes the impact of patient assistance cards and similar programs). As OOP levels rise, so does consumer demand for drug price transparency and access to lower-cost purchasing options, both of which are often lacking at present. For example, the current cost of 60 tablets of metformin (500 mg) varies from \$4 to \$29, but it is not always easy for consumers to find comparative pricing information.⁷

Increasing difficulty for players to grow through horizontal consolidation. In recent years, it has become more challenging for players to create additional value by scaling up horizontally and acquiring a greater share of existing value pools. The recent scale-back or dissolution of proposed deals between Walgreens–Rite Aid, Humana–Aetna, and Anthem–Cigna, all of which were subject to regulatory challenges, is evidence of the challenges.

Segment-specific trends

Decreasing growth from rebate retention. Growth in spending on health benefits, along with increased competition between PBMs and health insurers for employer accounts, has caused many employers to push health insurers and PBMs to pass along a greater proportion of rebates. Many large employers (>5,000 employees) have already been receiving 100% of the rebates; in recent years, a growing number of smaller employers have insisted on 100% pass-through arrangements as well. In 2016, for example, 39% of smaller employers received 100% of the rebates for specialty drugs, compared with 23% in 2015.⁸

Declining growth from generics. Generic drugs have been an important source of profit for wholesalers, PBMs, and mail-order and retail pharmacies. In recent years, however, purchasing consolidation has increased, supply shortages have decreased, and regulators in the US have become faster at approving abbreviated new drug applications. The result has been lower price inflation—and thus lower profit growth—from generics in the value chain. Generic revenues are expected to increase only marginally over the next several years.

Decline in revenues and profitability from pharmacy store fronts. For the large drug store retail chains, the share of retail revenues resulting from front-of-store sales dropped about 4% to 6% between 2013 and 2016 (e.g., from 52% to 46% at CVS and from 37% to 33% at Walgreens).⁹ In response to this trend, many of the large retail chains are attempting to move deeper into pharmacy benefit management, specialty pharmacy, or retail healthcare.^{10,11}

Revenue and cost mismatch for hospital systems. Three specific trends are adversely affecting hospitals' current profit pool from drugs:

- *For hospitals, drugs are among the fastest-growing spend categories.* An American Hospital Association report showed that growth in inpatient drug spending per admission was 12% in 2015.¹² The same report indicated that reimbursement, especially for inpatient stays, has been rising by only 1% to 3% annually. The result has been margin compression.
- *The use of alternative sites of care is increasing, leading to lower hospital outpatient*

⁷GoodRX.com. Metformin. October 2017.

⁸Fein AJ. A tale as old as time: Examining employer-PBM rebate relationships for specialty drugs. *Drug Channels*. March 28, 2017.

⁹Terlep S, Stevens L. The real reason CVS wants to buy Aetna? Amazon. *Wall Street Journal*. October 27, 2017.

¹⁰Sederstrom J. Considering specialty pharmacy? Make your move. *Modern Medicine*. February 16, 2017.

¹¹Fein AJ. 2017 *Economic Report on US Pharmacies and Pharmacy Benefit Managers*. February 2017.

¹²NORC. Trends in Hospital Inpatient Drug Costs: Issues and Challenges. Final report to the American Hospital Association. October 11, 2016.

revenues. Over the past eight to ten years, many hospitals have been able to increase revenues by performing infusions in outpatient rather than inpatient settings (outpatient infusions are reimbursed separately, not as part of a DRG payment). The revenue stream from outpatient infusions is also one of the reasons many hospitals acquired independent physician practices (between 2008 and 2016, consolidation of community oncology clinics into hospitals increased by more than 170%).¹³ However, this revenue stream is now threatened by the growing number of infusions being performed at home, a trend we expect to continue because:

- Increasing evidence demonstrates that infusions of several specialty drugs can safely be performed at home.¹⁴
- Our experience has shown that costs can be two to six times less when infusions are given at home rather than at a hospital. As a result, health insurers are using benefit design and medical policies to actively steer members toward home infusions.
- Uncertainty about reimbursement under the 340B program is increasing as a result of changes being made to the program.¹⁵ Although payments to providers from government payers would be affected first, the reimbursement changes, if adopted, have the potential to affect providers' pharmacy economics more broadly.

Amazon's potential entry

The threat of technology-driven disruption of the pharmacy industry became real with Amazon's intention to enter the market, its hiring of pharmacy professionals, and its recent acquisition of wholesale drug,

medical device, and supply licenses in at least 12 states.¹⁶ Although the opportunities for Amazon or a similar technology entrant are significant, so are the challenges. Several primary arguments underlie the belief that such a company could successfully disrupt the pharmacy industry:

The pharmacy market is sizeable and attractive enough to warrant aggressive investment.

With about \$500 billion in revenues, pharmacy is the second-largest retail category in the US¹⁷ (food and drink is first) and the only large category in which Amazon does not yet have a meaningful presence.

The economic spread across the value chain that could potentially be disrupted is large.

Our analyses indicate that close to \$100 billion in gross margins (before operating costs) are being retained by intermediaries across the pharmacy value chain. Historically, Amazon has been successful in markets where it can eliminate stakeholders or bypass middlemen and bring down prices.

There is demand for direct purchasing of drugs by consumers through an online vendor. The penetration of mail-order pharmacies has declined in recent years, largely because current players have not focused much on consumer experience and the large retail chains have pushed to retain scripts. A significant unmet consumer need still exists not only for greater price transparency (as discussed above) but also for greater convenience and ease of use, as well as consolidation with other purchases. A few initial attempts to sell prescription drugs online have started gaining traction (e.g., through startups like Pill Pack), and this market could be a significant opportunity for Amazon.

¹³Community Oncology Alliance. 2016 Community Oncology Alliance Practice Impact Report. October 4, 2016.

¹⁴Polinski JM et al. Home infusion: Safe, clinically effective, patient preferred, and cost saving. *Healthcare*. 2017;5:68-80.

¹⁵US Department of Health and Human Services. Medicare program: Hospital outpatient prospective payment and ambulatory surgical center payment systems and quality reporting programs [CMS-1678-FC]. Federal Register. November 1, 2017.

¹⁶Reuters staff. Amazon gains wholesale pharmacy licenses in many US states: Report. *Reuters*. October 26, 2017.

¹⁷Quintiles IMS Institute. *Medicines Use and Spending in the U.S.: A Review of 2016 and Outlook to 2021*. May 2017.

An online vendor can overcome significant consumer, operational, and regulatory challenges.

- An online vendor would have to be able to meet the complex regulations and clinical requirements for direct drug distribution. Amazon could potentially overcome the hurdles through acquisitions or in-house development (as its ability to obtain wholesale pharmacy licenses in several states has shown).
- Our research suggests that consumers have been less willing to make online purchases of drugs than of other retail products. To gain traction, an online vendor would likely have to significantly improve consumer experience with mail-order pharmacy purchases.
- An online vendor would have to be able to develop claims-processing capabilities for prescription drug sales and meet specific operational requirements (e.g., for controlled substances). In addition, it would have to establish appropriate connections to current adjudication systems for health insurers, employers, and individual consumers. Again, Amazon could obtain these capabilities through acquisitions or build them internally.

Stakeholders are willing to partner with Amazon.

- A “payer” entry point exists for an online vendor. Large health insurers and employers have been asking for greater transparency into drug prices and lower costs. They would likely find Amazon appealing and might consider partnerships with it, especially if Amazon is able to demonstrate appeal to consumers in the pharmacy space.

- Pharmaceutical companies would be interested in working with an online vendor. Pharmaceutical companies might be attracted to Amazon’s advanced logistics and warehousing capabilities, as well as its connection to consumers, and thus might prefer it to existing wholesale and distribution channels.

An online vendor could expand into adjacent markets to add scale to drug distribution. Amazon has already started penetrating the adjacent disposable medical supplies market, which is expected to grow to almost \$55 billion by 2020.¹⁸ In addition, Amazon Business is targeting smaller physician practices and could substantially increase its offerings to them over time.

How might value pools shift?

The opportunities for technology-led disruption, when considered in light of the underlying pharmacy trends described earlier, have the potential to cause significant shifts in pharmacy industry value pools:

Wholesaler value pools

Historically, 60% to 70% of the wholesale drug distribution industry’s gross profits have been driven by the distribution of generic drugs. Wholesalers have been able to create significant value through supply chain excellence, as well as their ability to negotiate, especially with generics manufacturers, and consolidate volume across a large set of fragmented buyers (e.g., independent pharmacies and hospitals). In the future, however, wholesaler value pools will likely be at risk because of:

¹⁸Freedonia Group. *Disposable Medical Supplies: Demand and Sales Forecasts, Market Share, Market Size, Market Leaders*. February 2016.

- Lower generic price inflation.
- Further margin compression as traditional drug-dispensing volumes increasingly move toward large retail pharmacies, which are more consolidated buyers.
- Potential technology-driven disruption, especially Amazon's possible entry:
 - Entry into mail-order pharmacy could bypass the wholesalers' supply chain, significantly disrupting generic profits.
 - Entry into disposable medical supplies, disposable medical equipment, and other medical categories would further reduce volumes, especially from small and midsize physician practices, home care, and other vendors.

Traditional pharmacy value pools

Retail drug chains are already seeing their traditional front-of-store pharmacy revenues decrease. In addition, our analyses suggest that the \$15 billion to \$20 billion in gross profits they are making from drug dispensing are also likely to decline because of:

- Lower generic price inflation.
- The growing number of specialty drugs and medications distributed through specialty pharmacies, home infusions, and other channels that bypass retail pharmacies.
- Technology-driven disruption, especially Amazon's possible entry, which could accelerate value pool shifts, particularly for OOP drug purchases but also for drugs covered by insurance.

PBM value pools

PBMs are likely to face significant competition to their traditional business model, which currently generates \$14 billion to \$18 billion in gross profits through rebate retention (20% to 35% of gross profits) and generics (through both the spread on generics rates with retail pharmacies and the PBMs' mail-order distribution services; together, they account for 35% to 45% of gross profits). Major factors that could disrupt this value pool include:

- Lower generic price inflation.
- Limited growth from rebate retention.
- Further disruption, if new entrants such as Amazon attract significant volume from both existing mail-order pharmacies and retail pharmacies that currently have contracts with payers through PBMs.

We believe that overall contraction of PBM value pools and the potential for further disruption will lead to increased integration of PBMs with other players in pharmacy value chain. Integration with health insurers is especially likely, given that such moves would create a more comprehensive approach to pharmacy management and deliver more value to employers and consumers—while allowing the integrated entities to retain a portion of the value created.

Hospital infusion value pools

The margin compression many hospitals are experiencing because of rising drug costs is likely to continue. In addition, hospitals may face a large shift in value pools because of changes in reimbursement for infusions. As we discussed earlier, a growing number of infusions are being

administered at home. Also, modifications to the 340B program that the Centers for Medicare and Medicaid Services (CMS) recently announced could further reduce hospital infusion revenues.¹⁹ We estimate that, over the next few years, hospitals' gross profits from infusions could decrease from \$20–25 billion to \$5–15 billion, depending on how various factors play out:

- The shift toward home administration could reduce—by 70% to 80%—the number of the hospital outpatient infusions for select specialty drugs paid for by commercial health insurers. Furthermore, the decrease in the number of outpatient infusions could be larger, depending on legislative dynamics affecting Medicare and Medicaid (e.g., passage of the 21st Century Cures Act).
- CMS announced that it is changing the reimbursement formula for drugs administered under the 340B program (from the current average sales price (ASP) plus 6% to ASP minus 22.5%). Given this modification, our estimates suggest that the profitability of 340B drugs—including those administered through infusions done in hospital outpatient settings—could potentially be cut in half. Since 340B drugs, a high percentage of which are infusions, currently account for 50% to 60% of the US hospital industry's total drug-related profits, a decrease in reimbursement for them will likely have significant knock-on effects.

Payer value pools

Whether health insurers—and employers—win or lose in coming years will likely depend on two factors:

- How they react to tailwinds in the pharmacy value chain (e.g., the anticipated reduction in rebate retention).
- How innovatively they think about new channels such as Amazon and new approaches to holistically manage both traditional and specialty pharmacy spend.

How could players react?

Given the changing dynamics of the pharmacy industry, all players are likely to need new strategies if they are to continue creating value and stay relevant. We believe there are three imperatives for players in the new environment to consider:

Imperative 1. *Pursue business models that deliver a lower total cost of care for consumers and employers.*

These models will likely require more holistic integration of pharmacy management with managed care for medical spend and/or expanded integration across the continuum of care. The new scope of integration is apt to include such elements as retail health, traditional PBM services, home infusions, specialty pharmacy distribution, and medical and pharmacy cost management.

Imperative 2. *Leverage data aggregation and big data analytics to generate insights and create value, as players in other industries have done.*

The ability to combine pharmacy and medical data with both cost data (from claims) and outcomes data (from medical records) is likely to become increasingly important, especially because of the role the combined data can play in value-based purchasing, outcome-based pricing, and real-world, evidence-

¹⁹US Department of Health and Human Services. Medicare program: Hospital outpatient prospective payment and ambulatory surgical center payment systems and quality reporting programs [CMS-1678-FC]. Federal Register. November 1, 2017.

based decision making. Analytics and value-added services will also become important for wholesalers that want to retain business with hospitals and other fragmented buyers.

Imperative 3. *Put the consumer in the center, and be innovative in bringing more consumer insights-driven insights and actions into your business.*

The pharmacy business has traditionally lagged other parts of the healthcare industry in the adoption of consumer insights and approaches. However, the creation of consumer-centric platforms such as Amazon's or the development of insights drawn from both retail sales experience and health insurance is likely to dramatically change the pharmacy landscape.



Recent market events suggest that at least some industry players are already considering new approaches to managing the pharmacy

value chain. Express Scripts, for example, has acquired eviCore.²⁰ Anthem has announced that it will launch its own PBM (IngenioRx), with some functions to be serviced by CVS.²¹ Aetna CEO Mark Bertolini has recently said that his company is fundamentally rethinking how it works with PBMs.²² However, all players need to prepare for the full range of challenges and opportunities the pharmacy industry is facing—regardless of whether or not a player such as Amazon opts to enter the market. The three imperatives described in this paper can help them develop effective strategies. ○

Alex Sozdatelev (Alex_Sozdatelev@mckinsey.com) is a partner in the Chicago office. **Suhail Acharya** (Suhail_Acharya@mckinsey.com) is an expert associate partner in McKinsey's New Jersey office. **Megan Colwell** (Megan_Colwell@mckinsey.com) is a consultant in that office. **Shubham Singhal** (Shubham_Singhal@mckinsey.com), a senior partner, is leader of McKinsey's Global Healthcare Practice.

Editor: Ellen Rosen

For media inquiries, contact Julie Lane (Julie_Lane@mckinsey.com)

For non-media inquiries, contact the authors

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²⁰ Express Scripts to acquire eviCore healthcare; accelerates company's shift to patient benefit management. Express Script news release. October 10, 2017.

²¹ Matthews AW. Anthem to launch its own pharmacy-benefit manager. *Wall Street Journal*. October 18, 2017.

²² Tursman JP. Aetna sees evolving relationship, 'fundamentally rethinks' PBM role. *Drug Benefit News*. May 5, 2017.