Lifting the Curtain on Drug Pricing

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President and Co-founder
3 Axis Advisors LLC and 46brooklyn Research

2019 ASCP Annual Meeting & Exhibition
Aged to Perfection
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#ASCP50

Speaker Information – Bio

• President and Co-founder of 46brooklyn Research – 501c3 non-profit focused on improving drug pricing and supply chain education
• President and Co-founder 3 Axis Advisors – highly-specialized consultancy that helps organizations solve complex, systemic problems through data-driven advocacy
• Former President of a chain of 20 community pharmacies
• 17 years of experience across a wide variety of technical and management roles on both "Wall Street" and "Main Street"
• B.S. in Chemical Engineering from University of Florida
• M.B.A. from Harvard Business School
Disclosure – Eric Pachman

• No disclosures

Learning Objectives

1. List the current myriad of drug pricing sources available in the US.

2. Describe and interpret drug pricing data through data visualizations in the US drug supply chain.

3. Identify overall trends in drug pricing in the US.
Self-Assessment Question 1

Which generic pricing benchmark has gone up 936% since 1995?

A. AWP  
B. NADAC  
C. WAC  
D. FUL

Self-Assessment Question 2

What is the practice called where a PBM charges one price to a payer for a claim and pays a different price to a pharmacy?

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B. Spread Pricing  
C. PBM Profit Optimization  
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Self-Assessment Question 3

Which term captures any compensation received by a Part D sponsor or its PBM after the point-of-sale that serves to change the final cost to the payer?

A. BER  
B. DIR  
C. GER  
D. None of the Above  

My three-year journey to becoming a drug pricing “expert” 

YOU CAN TRUST ME  
I'M AN EXPERT 

“...In the beginner's mind there are many possibilities, in the expert's mind there are few.”
—Shunryu Suzuki
An ugly introduction to pharmacy

• Ohio Medicaid managed care in mid-2016
  • Five managed care plans – all in “spread contracts” with their PBMs
  • Two PBMs – CVS/Caremark and OptumRx
  • Managed care dominates the state
• August 1, 2016 – Day 1 on the job as President of a chain of 22 community pharmacies (20 in Ohio)
  • (Very) small pharmacies in rural communities
  • Heavy Medicaid managed care
• My start date coincided with the beginning of extreme margin pressure in Medicaid managed care
  • Generic margins fall to under $1 per prescription Summer 2016
  • No material changes to generic margins in Medicare or Commercial
• My top priority for rest of year became figuring out what was going on with reimbursements in Ohio Medicaid managed care
Columbus, we have a problem

Efforts to educate lawmakers fail, but Spread Warning Signs Emerge

- Medicaid managed care generic margins recovered at the start of the year to mid-single digits, then declined into the low-single digits in Q2 and Q3 2017
- Worked with Ohio Pharmacist Association to ramp up education of lawmakers on arbitrary nature of generic reimbursements
- **July 2017**: Amendment introduced into state budget to require acquisition cost plus professional dispensing fee in managed care
  - **Failed**
- **July 2017**: Amendment introduced into state budget to require transparency in managed care
  - **Failed**
- **Warning signs of spread pricing start surfacing in Ohio’s reported FY17 drug prices**
One of our first views of “spread” pricing

**Generic Cost/Revenue per Script**
*Normalized to 100% in FY2015*

![Graph showing changes in cost per script over time.](image)

Then October 26, 2017 Happened.

“…When pharmacy-benefit manager cuts put lives in jeopardy”

Pharmacists in Dayton, Marysville, Circleville and other Ohio cities told The Dispatch that they... saw a rapid decline in reimbursements — drops of nearly 80 percent — for generic Suboxone last fall, endangering the recovery of innumerable addicts caught up in the state’s opioid crisis.

The decision to slash rates was made by CVS Caremark. It remains one of the nation's most stark examples of the potentially life-and-death impact of hidden price manipulation by these PBMs — little-known middlemen in the drug supply chain that, on the one hand, decide how much money to give pharmacies for each drug and, on the other, determine how much taxpayers pay through Medicaid for those same drugs.
Columbus Dispatch pressures Ohio Medicaid to Act

• On January 25, 2018 the Columbus Dispatch published their first article diving into the murky world of generic drug pricing and PBMs
  • Their Side Effects series now includes more than 100 articles
• The Dispatch’s relentless coverage forced the Ohio Department of Medicaid into performing its own audit, which identified $224 million in spread pricing
• Ohio’s state Auditor (David Yost) conducted his own audit, and identified that $208 million of the total spread was generated from generic drugs
  • Generic spread equated to 31.4% of gross generic spending in Ohio Medicaid managed care
• Ohio eliminates spread pricing effective January 1, 2019
Formed to Shed Light on Drug pricing Distortions

- Meanwhile, we were seeing major generic drug pricing distortions in Medicaid across the country.
- Studying why generic drug prices were so disconnected from their actual cost became an obsession...
  ... which ultimately resulted in me leaving pharmacy in July 2018 to study the drug supply chain full time
- 46brooklyn Research was formed in August 2018 to:
  1. Improve the accessibility and usability of public drug pricing data
  2. Provide original research to the public explaining the drug supply chain

46brooklyn is a 501(c)(3) non-profit that provides all content free of charge to the public

Over The Next 13-months

- Developed and published ten different data visualizations
- Published fourteen in-depth drug pricing research reports
- Published an additional ten pricing analysis articles
- Referenced in 50+ media articles by 25+ different media outlets
The Year of Disruptive Transparency

The Spread Pricing dam is about to break
Kentucky releases spread pricing report

Drug Middlemen Took $123.5 Million in Hidden Fees, State Claims

Prognosis

Drug Middlemen Took $123.5 Million in Hidden Fees, State Claims

By Robert Langreth
February 21, 2019, 1:36 PM EST

In state plans for poor, markups for middlemen jumped in 2018.

CVS, Express Scripts, OptumRx dominate PBM market in the U.S.

Study sponsored by pharmacists group upset over reimbursement

12.9% of overall spend!
(Ohio was 8.9%)

New York Spread Pricing Data Analysis

Drug Middlemen Got Big Markup in New York, Pharmacists Say

By Robert Langreth
January 24, 2019, 6:10 AM EST Updated on January 24, 2019, 11:54 AM EST

Study found 32% markup on NY generic drugs in 2017
Michigan Spread Pricing Data Analysis

Report: Pharmaceutical Middlemen Profiting Unfairly

A report released Wednesday by the Michigan Pharmacists Association and three state senators has raised questions about the role of pharmacy benefit managers (PBMs) in Michigan, specifically the extent to which these companies are profiting unfairly from the spread of retail and community pharmacies in the state.

Could Michigan's high drug prices flow south to Ohio?

BY CATHY CANDISKE | THE COLUMBUS DISPATCH

A new study shows that pharmacy middlemen were profiting from Michigan’s Medicaid program much as they have in Ohio and other states, and there are signs of a potentially new spread pricing scheme.

The analysis of spending on more than 2 million prescriptions for generic drugs found that pharmacy benefit managers, or PBMs, charged Michigan taxpayers far more than they paid pharmacies to dispense the medications to Medicaid beneficiaries.

The practice, known as spread pricing, allowed PBMs to increase their profits, pushing Michigan’s drug spending...

Pharmacists: Benefit managers taking too big a cut of payments

By Greene

- Michigan pharmacists claim pharmacy benefit managers serving Medicaid HMOs have overcharged state and underpaid them by millions
- 'Spread pricing' practice by PBMs under investigation in Congress and several other states including Ohio, Illinois and New York
- PBMs and health plans say their management has helped hold down prescription prices to state...

Georgia Spread Pricing Study

Markets

Drug Middlemen Face State Probes Over Complex Pricing System

By Robert Langreth

April 9, 2019, 12:01 AM EDT | Updated on April 9, 2019, 10:25 AM EDT

In Georgia, a recent report to state legislators showed that markups in Medicaid managed-care programs varied enormously among plans, according to the report. Three of the plans used CVS to manage drug benefits, while a fourth used Express Scripts. While some plans appeared to be getting a good deal, two had markups of $6 per prescription or more.

The biggest differential was in the Peach State Health Plan, which is run by Centene Corp. and uses CVS as a pharmacy-benefit manager. In the fiscal year ended June 30, CVS paid pharmacies $90 million for drugs, or $30.07 per prescription. But CVS paid $120 million for the same drugs by the plan, or $52 per prescription, according to the report.

Exactly what the $30 million differential was used for wasn’t explained in the report.

“There is a total lack of transparency in the whole system,” says David Knight, a Georgia state representative. “It begs the question as to whom and where is the money going.”
State Attorney Generals are investigating

Attorney General Dave Yost seeking $16 million repayment from pharmacy middleman OptumRx

CATHY CANDISKY AND MARTY SCHLADE | THE COLUMBUS DISPATCH

Feb. 19, 2019

After nearly a year of investigating, Ohio is taking its first steps to recover money from pharmacy middlemen who do billions of dollars worth of business with state agencies.

Attorney General Dave Yost announced Tuesday that he is seeking repayment of nearly $16 million paid to pharmacy-benefit manager OptumRx by the Bureau of Workers’ Compensation. Yost intends to take OptumRx to nonbinding mediation, saying the company has overcharged the bureau since 2013. Such mediation is required under the contract between the bureau and OptumRx. If it fails, the dispute presumably will be taken to court.

Wall Street is Starting to ask questions

March 4, 2019  Baird Equity Research
Healthcare / Life Sciences

Healthcare Supply Chain & Pharma Services
Major Confusion: Does This Pass Your Sniff Test?

INDUSTRY UPDATE
Prices as of 03/01/2019

Ticker  Price  Mkt Cap (mil)  Rating  Risk

| ABC  | $62.24 | $17.75 | N | H |

■ Here’s where it gets interesting. We’re not sure why, but CVS didn’t use MAC (Maximum Allowable Cost) for this product. Ultimately the state of Ohio wound up paying $6.74 per tablet. Pharmacies selling five other sources of the same product (just with different labels) were reimbursed about $0.50 per tablet.
R.I.P. Spread Pricing

But Is Spread Pricing a Symptom of a Larger Problem?

I wonder what's under the surface...
Drug Supply Chain Illustration *(Oversimplified)*

- **Drug Manufacturer**
  - Wholesaler
  - PBM / Insurance Carrier
  - Pharmacy
  - Employer / Beneficiary

- Rebates
- DIR/GER
- Copay

**What’s the price? Depends on if it’s a brand or generic drug**

<table>
<thead>
<tr>
<th></th>
<th>Brand</th>
<th>Generic</th>
</tr>
</thead>
<tbody>
<tr>
<td>Wholesale Acquisition Cost (WAC)</td>
<td>Supplied by manufacturer – highly correlated to pharmacy acquisition cost</td>
<td>Supplied by manufacturer – no correlation to pharmacy acquisition cost</td>
</tr>
<tr>
<td>Average Wholesale Price (AWP)</td>
<td>WAC x 1.2 for majority of brands</td>
<td>Supplied by manufacturer – no correlation to pharmacy acquisition cost</td>
</tr>
<tr>
<td>Median National Average Drug Acquisition Cost (NADAC) discount to WAC</td>
<td>4.0%</td>
<td>49.5%</td>
</tr>
<tr>
<td>Median NADAC discount to AWP</td>
<td>20.0%</td>
<td>85.7%</td>
</tr>
</tbody>
</table>

Typical payer contract linked to: AWP, AWP
Brand drug pricing (Humalog)

Manufacturer rebates not included in any of these pricing benchmarks

1,259% Increase in Median Brand Drug WAC per Unit Since Start of 1995

NDA = New Drug Application
BLA = Biologics License Application
Generic drug pricing (Duloxetine)

Massive spread between generic drug AWP and acquisition cost

How good is AWP as a benchmark for generic drugs? Answer = not good

AWP vs. NADAC per Unit – 2018 Generic Drugs
And generic AWP gets worse each day

Median Generic (ANDA) Oral Solid Drug Price vs. CPI-U

Percent Increase
Jan 1995 through Jul 2019

- CPI-U: 71%
- AWP: 936%

Medicaid’s generic weighted average AWP is moving in the opposite direction of actual cost

Medicaid Annual Weighted Average AWP vs. NADAC per Unit (Oral Solids)
The growing irrelevance of point-of-sale reimbursements

Direct and Indirect Reimbursements (DIR)
- Must be Medicare Part D Claim
- “Any compensation received by a Part D sponsor or its PBM after the point-of-sale that serves to change the final cost to the payer”
- Usually a percentage of PBM-set ingredient cost
- Can also be a fixed per claim fee
- Usually (but not always) tied to pharmacy outcomes
- $4 billion of pharmacy DIR collected in 2017
- $33 billion of overall DIR collected in 2017

Generic Effective Rate (GER) and Brand Effective Rate (BER)
- Most commonly in Commercial and Medicaid, can be in Part D
- Pharmacy gets paid a discount to the AWP of all brand or generic drugs over some period
- Applied over entire PSAO network
- Point of sale reimbursement may or may not have any relevance to final payment

GER/BER-based DIR
- Must be Medicare Part D Claim
- DIR is calculated based on a GER/BER formula, rather than a percentage of ingredient cost

Example: Epinephrine 0.3mg/0.3mL Inj.

<table>
<thead>
<tr>
<th></th>
<th>AWP / Unit</th>
<th>Ing Cost Paid / Unit</th>
<th>DIR / Unit</th>
<th>Net Reimb. / Unit</th>
<th>NADAC / Unit</th>
<th>Pharmacy Margin / Unit</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>$456.25</td>
<td>$364.82 (20% GER)</td>
<td>($301.05)</td>
<td>$63.87 (86% GER)</td>
<td>$299.67</td>
<td>($235.80)</td>
</tr>
</tbody>
</table>

PSAO = Pharmacy Services Administration Organization

Summary and Conclusions
- Drug pricing is unnecessarily complicated and confusing
  - Incentives are structured to drive prices higher, not lower
- Lots of people are making lots of money off such confusion
  - Primary “weapon of obfuscation” for brands is rebates
  - Primary “weapon of obfuscation” for generics is AWP
- What you see at the point of sale has largely lost its relevance
  - DIR, GER, BER completely change pharmacy margin
- Good news is that there is significant attention on this problem right now
  - Policy changes being proposed – some optimism that system will be repaired
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