



**PHARMACISTS SOCIETY OF THE STATE OF NEW YORK**

**TESTIMONY**

**JOINT LEGISLATIVE BUDGET HEARING  
HEALTH AND MEDICAID**

**February 5, 2019**

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Three large PBMs dominate the managed care market. According to recent published reports CVS/Caremark, ExpressScripts (ESI) and Optum Rx collectively control 75% to 85% of prescriptions dispensed in the United States, including prescriptions covered by Medicare Part D Plans and Medicaid managed care plans. Their profitability parallels increased drug costs. The big three generated net profits totaling \$12.3 billion in 2017 according to their 10-K SEC filings.

**Formulary control** makes pharmacy benefit managers the major player in the prescription drug market. Formularies provide leverage in rebate negotiations with pharmaceutical manufacturers and prescription drugs with "preferred" status bring higher rebates that do not always make it back to the patient or payer. PBMs are increasingly adopting drug exclusion lists and both of these aspects of coverage affect which medications are available to patients.<sup>2,3</sup> It is important to note here that current state law has no external appeals procedure for patients/caregivers or prescribers to appeal a drug coverage decision by a health plan or its PBM sub-contractor.

**The pharmacy market is broken.** Large PBMs own and operate mail order and "specialty" pharmacies. They also "manage" pharmacy networks, an arrangement is fundamentally anti-competitive. It is not a surprise that PBMs steer prescription volume to themselves and mandate that patients receive prescription refills or "specialty" medications exclusively from the mail order or specialty pharmacies they own. In addition to steering which is perfectly legal under the current law, PBMs have unfettered control over how much they pay their network pharmacies, their competitors in the pharmacy marketplace. Community pharmacies of all sizes, from the single store independent to chains as large as Walmart, are victims of this broken market.<sup>4</sup> **The Governor's PBM licensing proposal shines light on the routinely unfair business practices that are bringing New York's pharmacies to their knees.**

In a particularly egregious example of unfair predatory behavior, in the fall of 2017 a large PBM that dominates state's managed care pharmacy market (both private insurance and Medicaid managed care) drastically cut payments to pharmacies significantly below acquisition cost for a substantial number of prescription drugs across many therapeutic categories. Pharmacies then received buy-out offers from the same corporation citing market pressures such as low reimbursements and reduced profitability.<sup>5</sup>

PSSNY members throughout the state are reporting that they are running out of belt-tightening options as they wrestle with PBM reimbursements that are below cost, patients who are required to use mail order or specialty pharmacies in order to access their

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<sup>2</sup> The Doctor Patient Rights Project. "The De-list: How Formulary Exclusion Lists Deny Patients Access to Essential Care. December, 2017.  
<sup>3</sup> Ne'eman, Ari. "Formulary Restrictions Devalue And Endanger The Lives Of Disabled People." October 29, 2018. Health Affairs blog. <https://healthaffairs.org>.  
<sup>4</sup> Schladen, M. and Candisky, C. "Report: CVS Shorted Some Rivals: Undercutting the Competition." The Columbus Dispatch January 20, 2019  
<sup>5</sup> "CVS/Aetna: State Regulators Urged to Investigate CVS Caremark Reimbursement Cuts, Solicitation Letters, as Part of Aetna Review. The Capitol Forum. January 12, 2018

A report by the Ohio State auditor from August, 2018 documented the dollar value of spread pricing in the Ohio Medicaid managed care program.<sup>7</sup> Spread pricing in Medicaid managed care in Ohio amounted to \$208 million a year. Medicaid officials quickly directed the state's five managed care plans to eliminate all contracts with pharmacy benefit managers based on secretive spread pricing and to move to a more transparent pass-through pricing model effective January 1, 2019. This is what the Governor's Executive Budget proposes and what PSSNY knows needs to happen in New York.

"The more we learn, the more troubling this becomes," said Ohio State Auditor Dave Yost in releasing audit results in August. Ohio's official state audit began as a direct result of an independent analysis from data collected from a number of independent pharmacies. The analysis captured the amount pharmacies were paid for selected drugs under fee for service and the amount they were paid for the same drug by PBMs servicing Medicaid managed care plans (MCP) for the same drug. This data was posted on the CMS website where states reported their drug costs. It is publicly available prescription cost data. The difference between what plans were paying and what pharmacies were paid for generic drugs was significant. Legislators were briefed on the findings. Medicaid officials asked questions. When the Ohio State auditor compared what pharmacies were paid by PBMs to what plans were charged, he found that PBMs had pocketed \$208 million of taxpayer dollars because of spread pricing. His findings validated the results of the initial private study.

*Spread pricing: The PBM bills the managed care plan (MCP) one amount for a patient's medication, and pays the pharmacy a different (smaller) amount to dispense it. It keeps the difference as profit – along with any rebate it receives from the manufacturer. That means PBMs have an incentive to bill the MCP (i.e. the taxpayers) as much as possible while paying the pharmacy as little as possible. Until recently, the amount of a PBM's spread, and how much it received in rebates, has been a closely guarded secret.*

The Ohio Pharmacists Association reported that pharmacies in Ohio were netting \$1.15 per Medicaid prescription on generic drug prescriptions while pharmacies owned by PBMs were pocketing \$6.15 per prescription. Pharmacies were paid more than \$350 million below typical market rates, a finding that helps to explain the number of pharmacy closures that alarmed Ohio legislators and prompted the administration to move to a pass-through pricing model such as is being proposed by Governor Cuomo.

*Pass-through pricing: The PBM receives a flat fee for each prescription it processes, on top of the actual cost of the medication. Pharmacies are paid a set amount per prescription as a professional dispensing fee.*

**PSSNY Commissioned a White Paper to examine spread pricing in Medicaid managed care in New York which was completed in January. A copy of the study is included with this testimony.**

<sup>7</sup> <http://ratehousenews.com/sideeffects/ohio-medicaid-drug-audit-calls-transparency-highlights-pharmacy-closures/site/dispatch.com/>

## Solving the Spread Pricing Problem

Eliminating spread pricing in Medicaid managed care as the Governor has proposed, together with effective DFS regulatory oversight of businesses that provide pharmacy benefit management services as stand-alone companies or as part of a vertically integrated healthcare corporation is a good start. However, eliminating spread pricing does not ensure that pharmacies are compensated at fair and reasonable rates that allow them to remain financially viable over time. PSSNY therefore makes the following recommendations:

- Return to Fee for Service for the Pharmacy Benefit to give the state control over every rebate dollar generated by the Medicaid program. When PBMs control drug formularies they have incentives for manipulating and retaining rebates from pharmaceutical manufacturers. A uniform Medicaid formulary for every beneficiary ensures fair treatment and consistent prior authorization and appeals procedures. Predictable reimbursement policies would be a marked improvement over the current inconsistent, often incomprehensible reimbursement pharmacies receive from PBMs.

- Establish a pharmacy reimbursement floor in Medicaid managed care. Consider current Fee for Service benchmarks as the floor: Actual acquisition cost as represented by the National Average Drug Acquisition Cost (NADAC) and the \$10.08 professional fee. While this fee is lower than the fees of neighboring states such as New Jersey, Vermont and Connecticut, and is not reflective of the cost of operating a pharmacy in New York State, it does represent a starting point for discussions.

- Conduct a statewide comprehensive analysis of spread pricing in Medicaid managed care to determine the full extent of spread pricing in the state Medicaid program and use a portion of the savings to provide pharmacies with fair and reasonable compensation for their professional services and the medications they dispense.

PSSNY pledges to continue to work with members of the legislature, state agencies, administration officials and other stakeholders to develop and provide progressive policies that promote healthy communities where community pharmacies thrive and pharmacists are rewarded for the important services they are uniquely well-equipped to provide. Please help the pharmacists in the state of New York continue their commitment to patient care. Pharmacists are part of the solution to the problem of rising healthcare costs as we are the most accessible healthcare providers capable of influencing outcomes. Without immediate and comprehensive reform in the current PBM dominated model, this ability will be irrevocably compromised.

Our members need relief to remain viable and we need relief now.



Pharmacists Society of the State of New York, Inc.

January 24<sup>th</sup>, 2019

On behalf of The Pharmacists Society of the State of New York ("PSSNY"), we would like to present the following whitepaper from 3Axis Advisors. The whitepaper is the result of a study that PSSNY commissioned to examine the practice of spread pricing as it impacts New York's Medicaid managed care program. While this study is not an exhaustive look at claim level detail for every prescription dispensed under the Medicaid program, the sample size is more than robust enough to confirm that reimbursement issues experienced by New York pharmacies parallel timelines and magnitudes already publicly addressed by other state Medicaid programs. In short, this study confirms PSSNY's long held suspicions that the current pharmacy reimbursement model is broken and too easily manipulated by Pharmacy Benefit Managers ("PBMs") acting in their own self-interest.

New York has long been at the forefront of the value-based care movement with the creation of its Medicaid Redesign Team ("MRT") in 2011, and the subsequent creation of the Delivery System Reform Incentive Payment ("DSRIP") program. These concepts and programs are an effort to "transform the state's health care system, bend the Medicaid cost curve, and ensure access to quality care for all Medicaid members"<sup>1</sup>. PSSNY's longstanding assertion that the practices of the PBM industry have been inconsistent with the stated goals of the MRT has been confirmed by this study. Whether it be due to misaligned incentives, improper contracting, or plain old greed, the value proposition offered by the PBM industry does not coincide with the dollars extracted by these companies for their own financial benefit.

PSSNY knows that the unchecked PBM industry has taken advantage of a gross lack of transparency and regulatory control. It is far past time that these companies stop hiding behind "take it or leave it" contracts, gag clauses, confidentiality agreements, nondisclosure agreements, and other practices not allowed in other aspects of American life. PBMs should be licensed, regulated, and held to the same standards of excellence and accountability as other stakeholders and participants in the delivery of healthcare to patients throughout the State.

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  - American Society of Consultant Pharmacists
  - National Alliance of State Pharmacy Associations
  - National Community Pharmacists Association
- State Affiliates**
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  - Capital Area Pharmacists Society
  - Hudson Valley Pharmaceutical Society
  - Indo-American Pharmaceutical Society
  - Italian-American Pharmacists Society
  - Korean-American Pharmacists Association of NY
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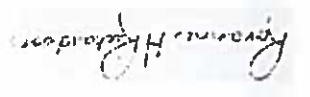
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- Touro College of Pharmacy
- University at Buffalo School of Pharmacy and Pharmaceutical Sciences
- Wegmans School of Pharmacy, St. John Fisher College

The anticompetitive business practices of the PBM industry are felt by independent pharmacies, hospital pharmacies, and chain pharmacies of all sizes. Their practices negatively impact the ability of pharmacists and other health care professionals to provide patient care. If Walmart, the number one company on the Fortune 500 list, cannot effectively negotiate equitable terms with these PBMs without going to the media, what chance does another pharmacy, or even a state Medicaid agency, have of doing so?

The practices of the PBM industry have been detrimental to the profession of pharmacy and to the patients we serve as well the tax payers that fund the Medicaid program. The findings of the attached study indicate that hundreds of millions of dollars that should have been allocated towards providing care to New Yorkers have instead been shifted elsewhere. PSSNY wholeheartedly agrees with the recommendation of 3Axis Advisors, and calls on the state of New York to conduct a full audit of its Medicaid managed care pharmacy program, using the complete dataset available to the State, in order to confirm the findings of this study.

In the meantime, PSSNY and its member pharmacists will not stand by and allow these "middlemen" to continue to profit at the expense of pharmacists, other health care providers, patients, and tax payers. PSSNY will work with our elected officials and other allies to see New York take its rightful place as a national leader and immediately enact comprehensive, strongest-in-the-nation PBM reform. As the attached study demonstrates, New York cannot afford not to...

Sincerely,



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JANUARY 17, 2019

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# Analysis of PBM Spread Pricing in New York Medicaid Managed Care

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3ΔXIS Advisors

## 1 EXECUTIVE SUMMARY

Spread pricing is a core component of the traditional pharmacy benefit manager (PBM) business model. In a spread transaction, PBMs generate revenue by charging the payer one price for a drug, paying a lesser amount to the pharmacy that dispenses the drug, and then retaining the difference. The PBM has separate contracts with the payer and the pharmacy that allow it to price the same claim differently, generating revenue from the spread. According to one of the largest PBMs in the market, CVS/Caremark, this model provides the payer "stability and certainty around drug costs" and funds "vitaly important benefit management services... in lieu of the client paying a separate administrative fee."<sup>1</sup>

However, spread transactions are not transparent by nature. The PBM charges a payer a price for a drug that is neither stable or certain nor based on a prevailing market rate. The PBM's payment to a pharmacy is based on proprietary pricing lists maintained by the PBM that do not have to cover the pharmacy's operating costs and can change without notice. These types of transactions happen to be highly prevalent in Medicaid managed care, where the state's contracting responsibilities with pharmacy providers are outsourced to managed care organizations (MCO).

Over the past year, the nature of spread transactions has drawn increasing attention from both pharmacies and lawmakers across the country. Spurred by the Ohio Auditor's findings that Ohio Medicaid managed care paid \$208 million in spread pricing on generic drug claims over a recent 12-month period (\$6.14 per claim – 3-6 times higher than market-based PBM fees of \$0.95 to \$1.95 per claim<sup>2</sup>), payers and providers in New York are now looking for insight into how much PBMs are claiming in spread revenue for the management of their program.

In 2017, we estimate that New York Medicaid managed care spent the most on generic drugs compared to all other state managed care programs, with nearly \$1.3 billion spent (\$6.7 billion combined for generic and brand name drugs). The large size of the program elicits the need to bring better understanding to the nature of spread pricing in New York.

This study was commissioned and funded by the Pharmacists Society of the State of New York (PSSNY) to estimate the nature and extent of spread pricing within the New York Medicaid managed care program. Further, the objectives are to explain the nature of a pharmacy transaction, illustrate how spread is impacting both payer and pharmacy, and estimate spread on generic drug claims using a limited, but robust, sample of pharmacy data.

To estimate the nature and extent of spread pricing in New York Medicaid managed care, we collected nearly two million prescription claims from pharmacies across New York. Of these claims, there were nearly 170,000 generic oral solid (e.g. tablets and capsules) prescriptions dispensed between January 1, 2016 and March 31, 2018. Based on this sample, pharmacy unit revenue was compared to publicly-available datasets from the Centers for Medicare & Medicaid Services (CMS) that measure state drug costs (State Utilization Data) and pharmacy acquisition cost (National Average Drug Acquisition Costs, or NADAC). For generic oral solid drugs in New York Medicaid managed care, the key findings related to PBM spread were:

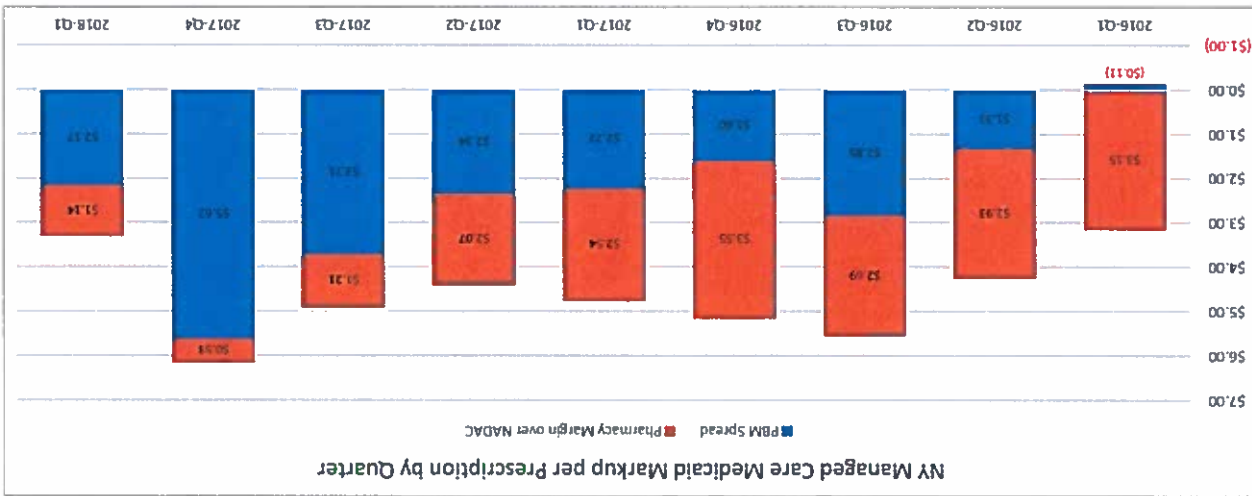
- In 2016, aggregate PBM spread was 10%
  - In Q1 2016, there was no PBM spread
- In Q4 2017, PBM spread was 39% of overall generic spend, or \$5.62 per claim
  - Between April 1, 2017 and March 30, 2018, PBM spread was 24% of overall generic spend
- In comparison, Ohio's Auditor found a 31% spread over this period on generic claims

<sup>1</sup> <https://cvshhealth.com/newsroom/press-releases/cvs-health-statement-on-pa-auditor-general-report-on-pbms>

<sup>2</sup> <https://www.gongwer-oh.com/public/130/pbmrredacted.pdf>



- Between Q1 2016 and Q4 2017, NY managed care PBMs cut pharmacy gross margin by 83%. This resulted in an average margin (relative to NADAC) of \$0.53 per prescription for pharmacies – 5% of the state's \$10.08 per prescription cost to dispense in Medicaid Fee-for-Service? The data suggest that New York managed care PBMs are pricing most generic drugs below a pharmacy's cost to dispense and potentially using these savings to subsidize spread pricing on the remaining generic drugs
- More than 50% of the PBM's Q4 2017 spread came from just 6% of the dispensed generic drug claims



Additional findings of this study were:

- In Q4 2017, 99% of all generic oral solid pharmacy claims generated a margin of less than \$10 (cost to dispense) for the pharmacy
- We found no evidence of a correlation between the change in pharmacy reimbursement and the change in pharmacy acquisition cost for Fideis (PBM = CVS/Caremark) – the largest MCO in our study – raising questions on what is driving updates to the PBM's proprietary pricing lists

We recommend further work to determine:

- Whether managed care PBMs are consistently preferring drugs that will result in the lowest net cost for the state. In Q1 2018, we found that two highly dispensed HIV-1 treatment drugs were abruptly switched from brand to generic, potentially sacrificing sizable state/federal rebates
- How managed care is accounting for PBM spread in the Medical Loss Ratio (MLR) calculation

A limitation of the study was the lack of publicly-available claim-level data for all NY Medicaid managed care claims. This constricted our ability to analyze the full population of claims to precisely calculate PBM spread in NY Medicaid managed care. This level of precision is only possible with a comprehensive audit commissioned by either the State Comptroller, Department of Health or other auditing authority. This study strives to evaluate pricing distortions in NY Medicaid managed care and estimate and visualize spread pricing using the data analytics techniques and assumptions described in detail throughout this report.

**We highly recommend that the state of New York conduct a full audit of its managed care pharmacy program to confirm the findings of this study using a more comprehensive dataset.**

We hope that this study will help advance New York's insight into this opaque transaction and lead to productive discussions on ways to improve drug pricing transparency and spending prioritization within Medicaid managed care.

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## 4 BACKGROUND

On August 16, 2018, Ohio Auditor of the State Dave Yost released the findings of his investigation into the difference between the amount PBMs charged to insurance plan sponsors and the amount PBMs paid out to pharmacies for a prescription within the Ohio Medicaid managed care program.<sup>4</sup> This difference, also referred to as “spread pricing,” is one of the key mechanisms by which PBMs generate revenue. The model is popular among plan sponsors, because, according to leading PBM CVS/Caremark, it provides “stability and certainty around drug costs” and funds “vitality important benefit management services... in lieu of the client paying a separate administrative fee.”<sup>5</sup>

However, Auditor Yost found that reduced administrative fees and drug cost “certainty” have come at a steep price in Ohio’s Medicaid managed care program – lack of visibility into the actual cost of drugs being dispensed to beneficiaries and the pharmacies that are serving those beneficiaries. In Ohio’s case, the Auditor found that this designed opacity ended up being worth \$224.8 million to Ohio’s Medicaid managed care PBMs (8.9% of gross drug costs) between April 1, 2017 and March 31, 2018. The Auditor’s analysis shows an even more egregious disconnect between the state’s gross drug costs and its payments to pharmacies when we look at only generic drugs. Of the \$224.8 million in overall PBM spread, \$208.4 million (or 93%) was generated from generic claims, even though generic spending only made up 26% of total gross managed care drug spending. Overall, Ohio’s PBMs – CVS/Caremark, OptumRx, and Envoke – collectively took a 31.4% spread on generic drug transactions for their services.

Meanwhile, over this same period, pharmacies across Ohio were reporting that they were experiencing substantial (and seemingly arbitrary) margin compression on PBM reimbursements on Medicaid managed care claims. A study by HealthPlan Data Solutions (HDS) – commissioned by the Ohio Department of Medicaid (ODM) – found that Ohio pharmacies were underpaid by \$357 million on the nearly 34 million generic drug prescriptions that were dispensed over the audited time period relative to competitive marketplace pricing.<sup>6</sup> This equates to pharmacies being underpaid more than \$1.50 per generic prescription, which in Ohio made up 86.1% of all prescriptions dispensed through Medicaid managed care.

CVS/Caremark initially sued ODM to block the release of the full report that contained this finding (among others that have been redacted), claiming that “the disclosure of proprietary information in the Caremark agreements would be devastating to Caremark’s entire nationwide business model.”<sup>7</sup> While the issue of releasing the full, unredacted report is still being held up in legal proceedings, against the backdrop of this statement, complaints about under-reimbursement on Medicaid managed care plans started rising from several other states, including NY. Signs were emerging that excessive managed care spread pricing was not only an Ohio problem, but a component of a “nationwide business model.”

<sup>4</sup> [https://ohioauditor.gov/auditresearch/Reports/2018/Medicaid\\_Pharmacy\\_Services\\_2018\\_Franklin.pdf](https://ohioauditor.gov/auditresearch/Reports/2018/Medicaid_Pharmacy_Services_2018_Franklin.pdf)  
<sup>5</sup> <https://cvshhealth.com/newsroom/press-releases/cvs-health-statement-on-pa-auditor-general-report-on-pbms>  
<sup>6</sup> <https://www.gongwer-oh.com/public/130/pbmrredacted.pdf>  
<sup>7</sup> <http://gatehousenews.com/sideeffects/cvs-sues-state-block-release-report-drug-pricing/site/dispatch.com/>

## 5 WHAT IS SPREAD PRICING?

In order to effectively explain spread pricing, we must first start with the basics of any transaction that involves a buyer, a seller, and an intermediary whose role is to facilitate the transaction between the two parties. When it comes to a prescription drug transaction, the payer (in this case, managed care plan) is "buying" products and services from the pharmacy on behalf of a beneficiary, the pharmacy is "selling" these products and services to payer, and the PBM is the intermediary that is helping to facilitate this transaction. For successfully facilitating this transaction, the PBM receives a fee.

This is fundamentally no different from any other market where there is an intermediary facilitating a transaction between a buyer and a seller. When you buy shares of a company's stock, both you and the seller likely use a stock broker to help facilitate the transaction, and for their services, both you and the seller pay a fee to your respective brokers. That fee is transparent, and subject to considerable competition within the marketplace. In other words, if the fee is prohibitively high, both you and the seller will quickly look for different brokers to facilitate your transaction.

The underlying reason why buying and selling shares of a stock is so efficient is because both the buyer and the seller have full visibility into the price of the underlying product (one share of stock). The stock market sets this price, and it changes in real time with changes in supply and demand for the stock. If at the time of purchase, a share is trading at \$71.88, both the buyer and seller can see that the stock is priced at \$71.88, and both expect to transact right around that level and pay a small flat fee to their broker. As shown in Figure 1, both the buyer and seller transact around the same transparent price.

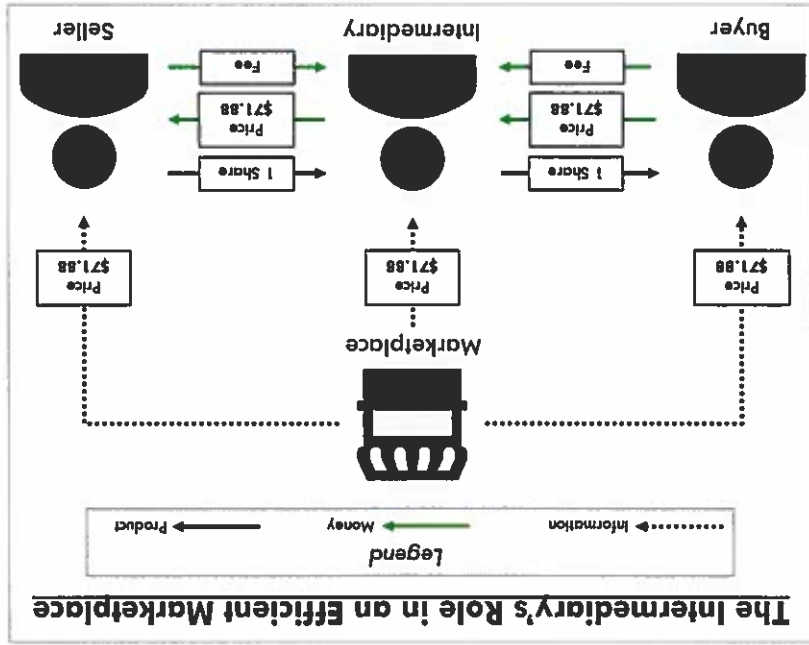


Figure 1: The Intermediary's Role in an Efficient Marketplace

A prescription drug transaction does not work this way because there is very poor transparency into the price of the product. Not only is it very difficult to obtain the product's price, but there are also different prices available for the same product at the same time, most of which are not set by a competitive marketplace. There is the Average Wholesale Price (AWP), the Suggested Wholesale Price (SWP), the Wholesale Acquisition Cost (WAC), the Average Manufacturer Price (AMP), Maximum Allowable Cost (MAC), and the National Average Drug Acquisition Cost (NADAC) – to name a few. This creates a situation where the buyer and seller could pay different prices for the same product within a given transaction, with the difference between the two accruing to the intermediary. In the financial world, this is called an "arbitrage." Arbitrage is "the purchase and sale of an asset to profit from an imbalance in the price... (that) exists as a result of market inefficiencies and would therefore not exist if markets were perfectly efficient."<sup>8</sup> In the prescription drug world, this is called "spread."

<sup>8</sup> <https://www.investopedia.com/terms/a/arbitrage.asp>

Here is an example of how spread works in a generic drug transaction. The buyer (i.e. insurance plan) has a contract with its PBM that specifies that it will pay some discount to AWP for a claim.<sup>10</sup> The seller (i.e. pharmacy) has a contract with its PBM that specifies that it receives MAC plus a nominal dispensing fee for the same claim. There are now two prices for the same product on either side of the transaction, and if they are not the same, what simply should be an intermediary transaction fee, turns into "spread pricing." To further convolute this situation, both AWP and MAC are not competitively set by the marketplace. For generics, AWP is set by the drug manufacturer (whose incentive is to leave the price artificially high) and rarely changes with market prices, while the discount to AWP for a discrete transaction is set by the PBM. On the other side of the transaction, MAC is a proprietary benchmark price set by the PBM with no oversight to ensure it covers the pharmacy's operating costs or even the drug itself. There is no efficient market controlling the gap between the two benchmarks. Instead, as shown in Figure 2, the PBM has tremendous latitude to control the spread.

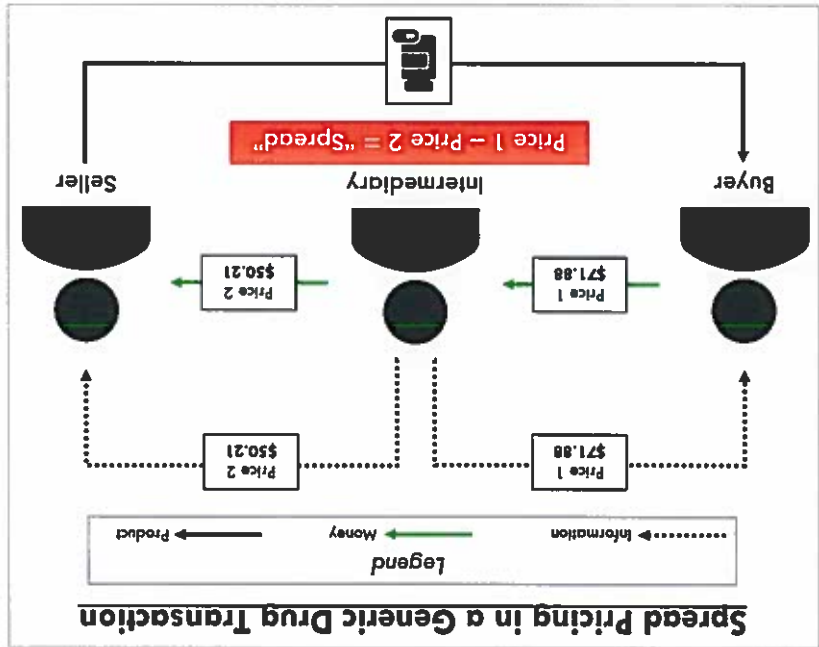


Figure 2: Spread Pricing in a Generic Drug Transaction

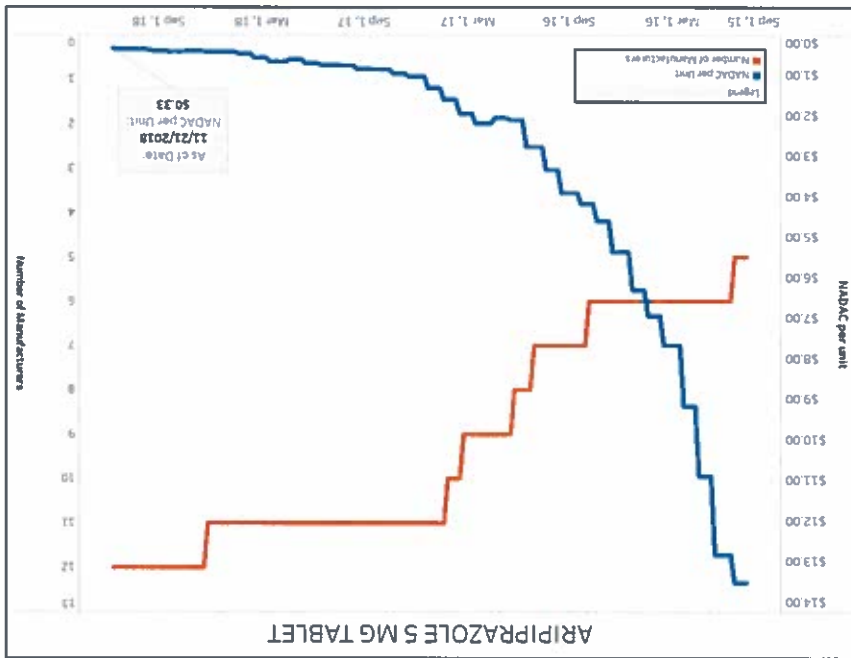
set by the drug manufacturer (whose incentive is to leave the price artificially high) and rarely changes with market prices, while the discount to AWP for a discrete transaction is set by the PBM. On the other side of the transaction, MAC is a proprietary benchmark price set by the PBM with no oversight to ensure it covers the pharmacy's operating costs or even the drug itself. There is no efficient market controlling the gap between the two benchmarks. Instead, as shown in Figure 2, the PBM has tremendous latitude to control the spread.

<sup>9</sup> <https://www.drugchannels.net/2009/11/drug-prices-and-pharmacy-profits.html>  
<sup>10</sup> This logic typically applies to the entirety of the payer's generic volume over a certain period. The percentage discount to AWP for any given transaction can vary widely, but the PBM must deliver a fixed discount to AWP over the period for the plan's aggregate generic drug spending. This is commonly called a Generic Effective Rate (GER) contract.

## 6 SPREAD PRICING CASE STUDY: GENERIC ABILITY IN NEW YORK

Ability is a commonly prescribed antipsychotic drug used to treat schizophrenia, bipolar disorder, and Tourette syndrome. Otsuka Pharmaceutical received approval for six strengths of Ability from the FDA on November 15, 2002. A decade after approval, Ability was generating over \$2.5 billion per year in worldwide revenue for Otsuka and its partner, Bristol-Myers Squibb. In 2014, the year before Ability's patent expired and the generic came to market, NY Medicaid spent over \$206 million on all strengths of brand-name Ability<sup>11</sup>, according to CMS' State Drug Utilization Database (SDUD). Of this total, New York spent \$46 million (before rebates) to buy 1.78 million Ability 5mg tablets, for an average cost of \$25.85 per tablet, nearly identical to the published WAC, which was \$25.88 per tablet at the time.

Otsuka implemented one more price increase on January 1, 2015, bringing the WAC for Ability 5mg to \$29.73 per tablet and the AWP to \$35.68 per tablet (a 20% premium to WAC). Just a few months later in April 2015, the generic (Aripiprazole) was brought to market by four different manufacturers. Fast forward more than three years to December 2018, and there are now 12 different manufacturers competing in the generic marketplace, which has driven the acquisition cost (as measured by NADAC) down to just \$0.33 per tablet (Figure 3).



However, as described earlier, the market-based acquisition cost is not directly factored into a transaction for generic prescriptions when contracts allow for PBMs to set and capture pricing spreads. The buyer pays some discount to AWP and the seller receives MAC plus a nominal dispensing fee. Unfortunately for the buyer, despite the steep decline in the actual price of Aripiprazole 5mg, its AWP has remained constant at around \$32.50 per tablet. This has resulted in the AWP for Aripiprazole 5mg to increase to a staggering 98 times its market-based acquisition cost. Returning to CMS' utilization

data, we can assess what New York Medicaid managed care actually paid for this drug over time, compared to its acquisition cost. This will then allow us to start gathering the data we need to figure out if prices are being set objectively. Figure 4 shows this relationship between Q1 2016 and Q1 2018 (the latest utilization data available for New York). The orange line is what the state paid per tablet each quarter while the blue line shows the average pharmacy acquisition cost per tablet. For example, in Q1

<sup>11</sup> This does not account for rebates, which likely dramatically reduced New York's net spending on Ability. Medicaid's rebate program is very rich for brand-name drugs, especially towards the end of their exclusivity. For more discussion on Medicaid rebates see 13.2: Deep-Dive into Medicaid Rebate – Impact on Optimal Utilization.



2016, New York managed care paid an average of \$14.01 per tablet while a pharmacy's typical invoice acquisition cost was \$7.03 per tablet.

The key takeaway from Figure 4 is that the price NY Medicaid managed care pays for this drug appears to be arbitrary. It does not change with changes in acquisition cost during each year, but instead appears to have "reset" at the start of 2017. Despite these price reductions, the state still paid \$3.74 per tablet in Q1 2018 (more than 7.5 times the drug's acquisition cost).

As such, it appears that the state is paying some variable discount to AWP (or some other non-market-based benchmark) for this drug, as opposed to a fixed margin on top of the drug's acquisition cost.

While this chart demonstrates that New York is overpaying for Aripiprazole 5mg tablets in managed care, we cannot determine if the PBMs are directly engaging in spread pricing with this drug. There is a chance that PBMs were paying out above-market charges for Aripiprazole directly to pharmacies, rather than

keeping this in the form of spread. To figure out who received the money, we need to overlay the actual pharmacy reimbursements on top of the public information to see how they compare to both state payments and pharmacy acquisition cost. Figure 5 shows the results of this analysis.

In Q1 2016, the pharmacies in our sample received an average of \$10.92 per tablet, resulting in a \$3.89 gross margin per tablet. Based on the cost reported to NY, the managed care PBMs priced this drug at \$14.01 per tablet, which after netting out the \$10.92 per tablet reimbursement to the pharmacy, resulted in a \$3.09 gross margin (PBM spread) per tablet. Fast forward to Q1 2018 and the PBM's margin is nearly identical at \$3.04 per tablet (\$3.74 cost less \$0.70 pharmacy reimbursement), but the pharmacy's margin has been reduced 95% to \$0.21 per

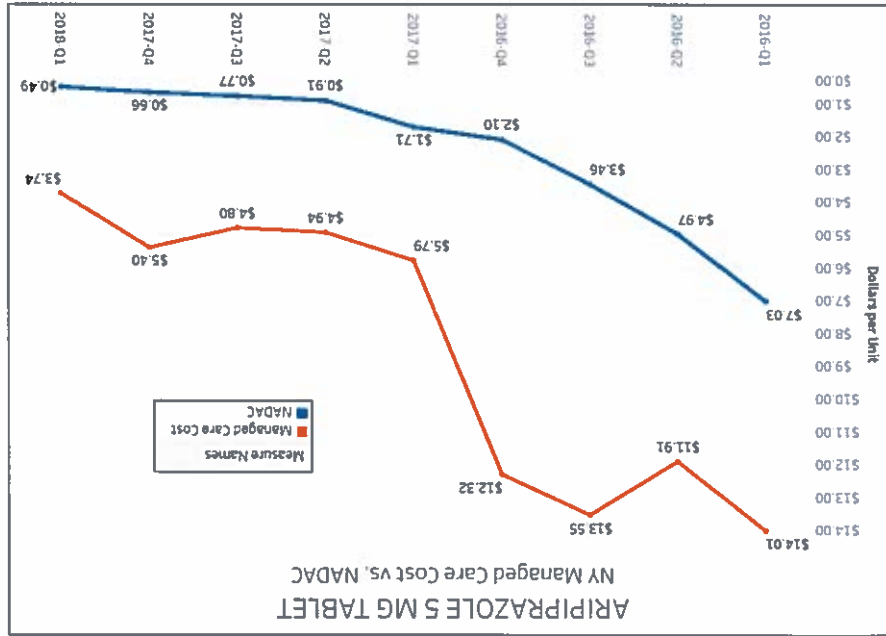


Figure 4: Generic Ability (5mg) Managed Care Cost per Unit vs. NADAC per Unit

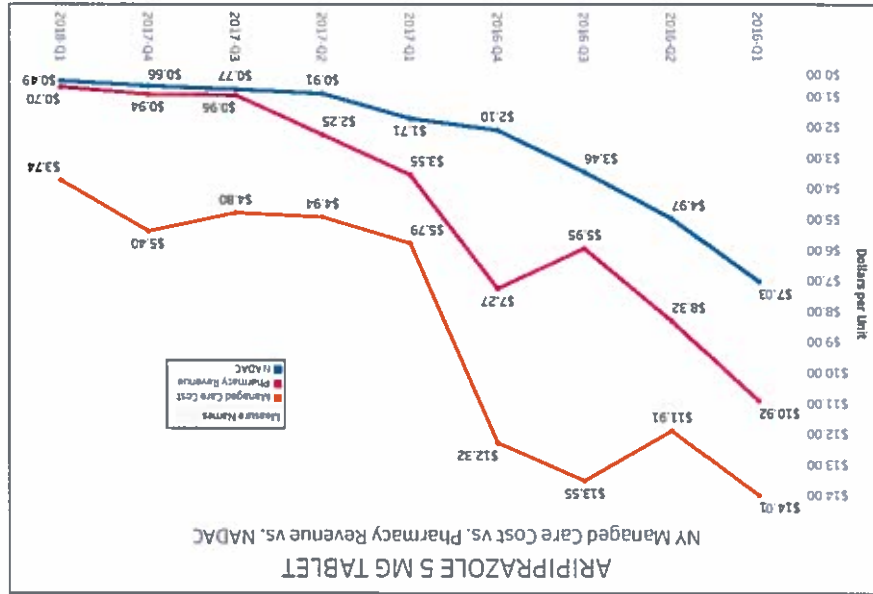


Figure 5: Generic Ability (5mg) Managed Care Cost per Unit vs. Pharmacy Revenue vs. NADAC per Unit

tablet (\$0.70 pharmacy reimbursement less \$0.49 NADAC). Clearly the state has recognized savings on Aripiprazole, as should be the case given the drug's underlying deflation over the past two years. However, this analysis clearly shows that there are more savings to be had, and the savings generated so far have been financed primarily through compression in the pharmacy's margin, as controlled by the state's managed care PBMs.

Figure 6 illustrates this spread another way. In 2017, NY Medicaid managed care purchased 1.45 million Aripiprazole 5mg tablets for a total cost of \$7.5 million, based on the pricing set by New York's managed care PBMs. The total NADAC ingredient cost of these tablets was \$1.4 million, resulting in \$6.1 million in total margin dollars accruing to the supply chain. Based on the per tablet reimbursements in Figure 5, we estimate that pharmacy was paid \$1.2 million of this margin, which left \$4.9 million in spread margin for PBMs (Figure 6).

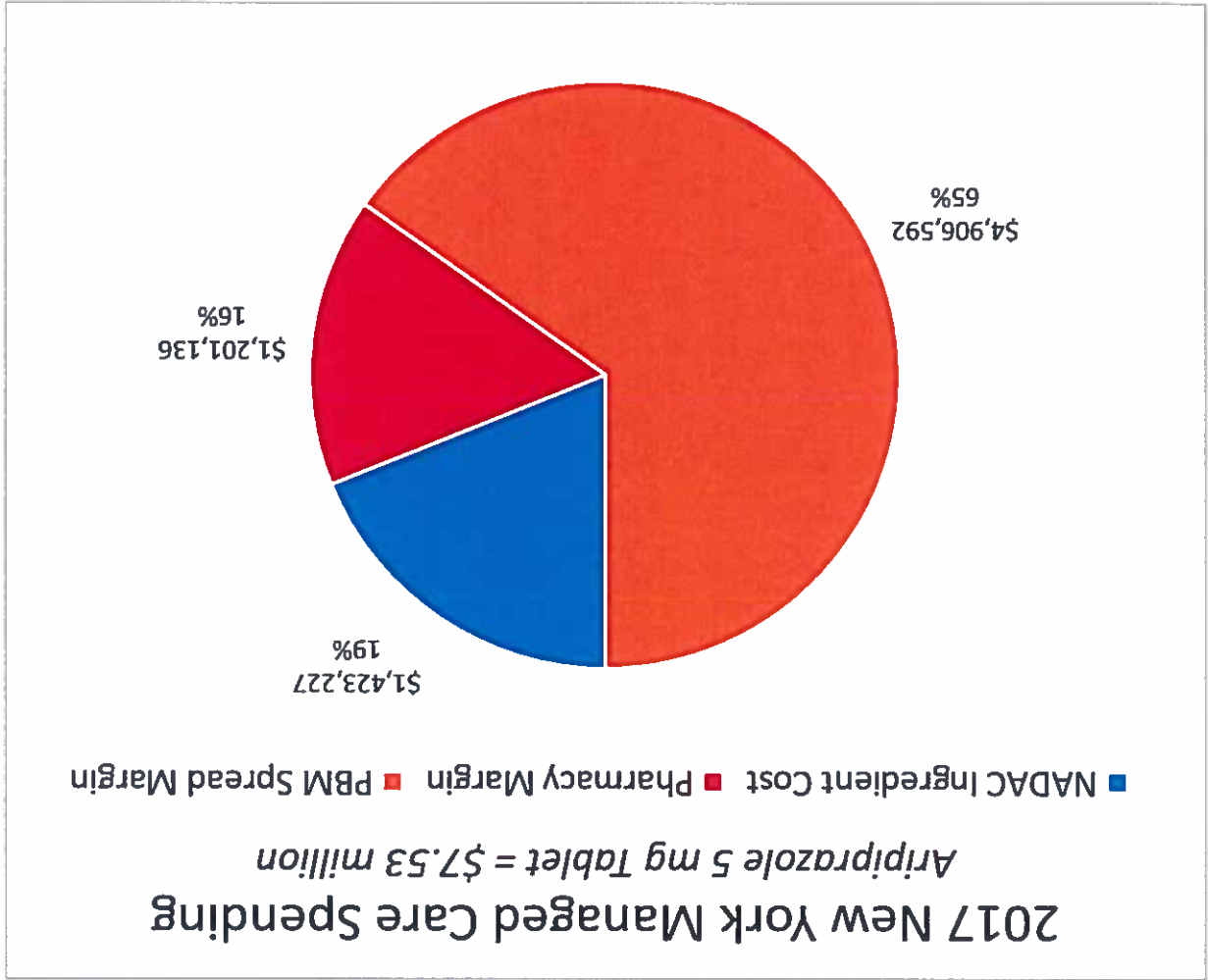


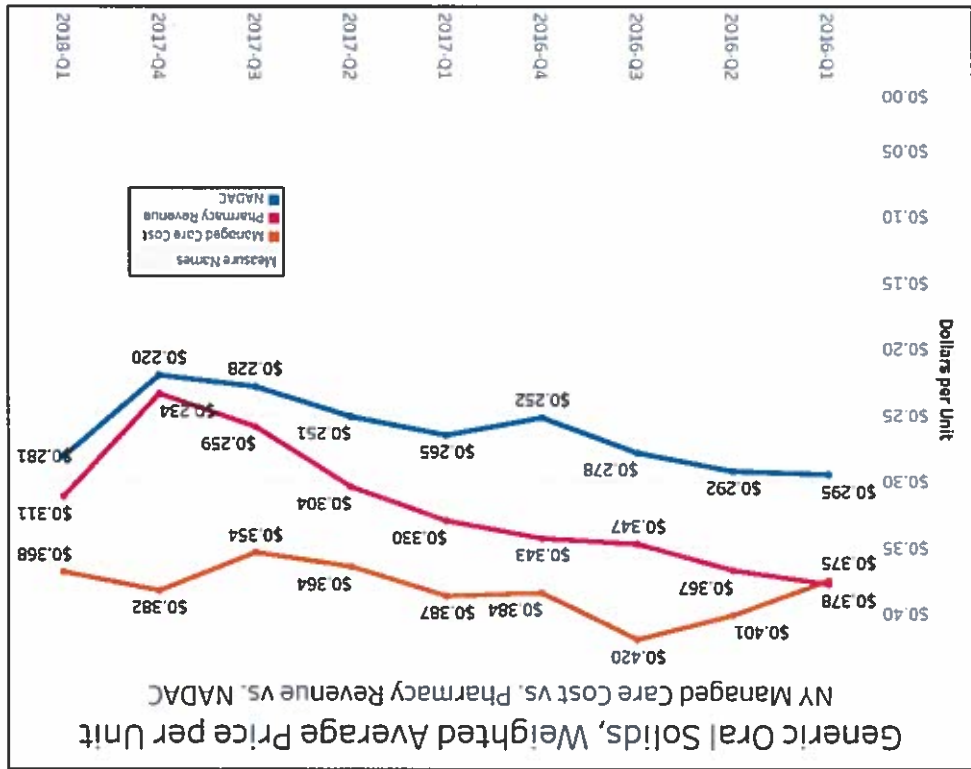
Figure 6: 2017 NY MCO Spending on Generic Ability 5mg

## 7 NEW YORK MEDICAID MANAGED CARE SPREAD PRICING ANALYSIS

The generic Ability case study naturally leads to an important question – is this an outlier within a program that is truly relying on market-based pricing to set generic drug prices, or is it representative of systemic problems with generic drug pricing in NY Medicaid managed care?

### 7.1 VISUALIZING GENERIC DRUG SPREAD

To answer this question, we extended the analysis performed in Figure 5 for Generic Ability to all generic oral solid<sup>12</sup> drugs in our database. Figure 7 shows the results of this analysis. Starting at the far left, in Q1 2016 managed care paid a weighted average of \$0.375 per unit for this basket of generic drugs. The



pharmacy received \$0.378 per unit, practically the exact same amount, resulting in no spread in the quarter. In the same quarter, weighted average NADAC per unit for this basket of drugs was \$0.295, which when deducted from the pharmacy revenue left \$0.08 per unit in pharmacy gross margin, or \$3.15 per prescription. Looking forward to Q4 2017, not much had changed from the state's perspective on this drug mix – cost per unit rose marginally to \$0.382. However, we see a vastly different picture with pharmacy revenue per unit, which was cut 38% to \$0.234 per unit. NADAC (the blue line) did drop by 25% over the same period, somewhat mitigating the margin pressure on the pharmacy. But the net impact was nonetheless dramatic – pharmacy margins were cut to just \$0.014 per unit, or \$0.53 per prescription, an 83% reduction when compared to Q1 2016. Without any significant change in the state's cost, a substantial spread opened between the state cost and pharmacy revenue for this drug mix. In Q4 2017, this PBM spread was \$0.148 per unit, or \$5.62 per prescription.

Figure 7: Generic Oral Solids Cost Comparison

12 We limited our analysis to "oral solids" (e.g. tablets, capsules) to prevent units of measure mismatches between disparate databases. For more detail see section 10.4: Step 4 – Combine Pharmacy Reimbursement/NADAC Database with New York's State Drug Utilization Data.

In the most recent quarter of data (Q1 2018), New York's managed care PBMs have reduced the spread on this drug mix to \$0.057 per unit, or \$2.17 per prescription. Pharmacy margin has increased as well to \$0.03 per unit, or \$1.14 per prescription (however, this quarter's data is distorted by a couple of individual drugs – see 7.2.1: Overcharged Generics for more detail).

Figure 8 presents a different view of the results, showing both the PBM spread and pharmacy margin per prescription for each quarter included in the study. Two key takeaways from this chart are:

1. The height of the stacked bars increased from just over \$3 per prescription in Q1 2016 to more than \$6 per prescription in Q4 2017. This means that NY managed care PBMs doubled the "markup" charged to the state.
2. At the same time PBMs were increasing the state's relative generic drug prices, they were also reducing pharmacy margin<sup>13</sup> (the orange series), resulting in a substantial increase in spread (the blue series).

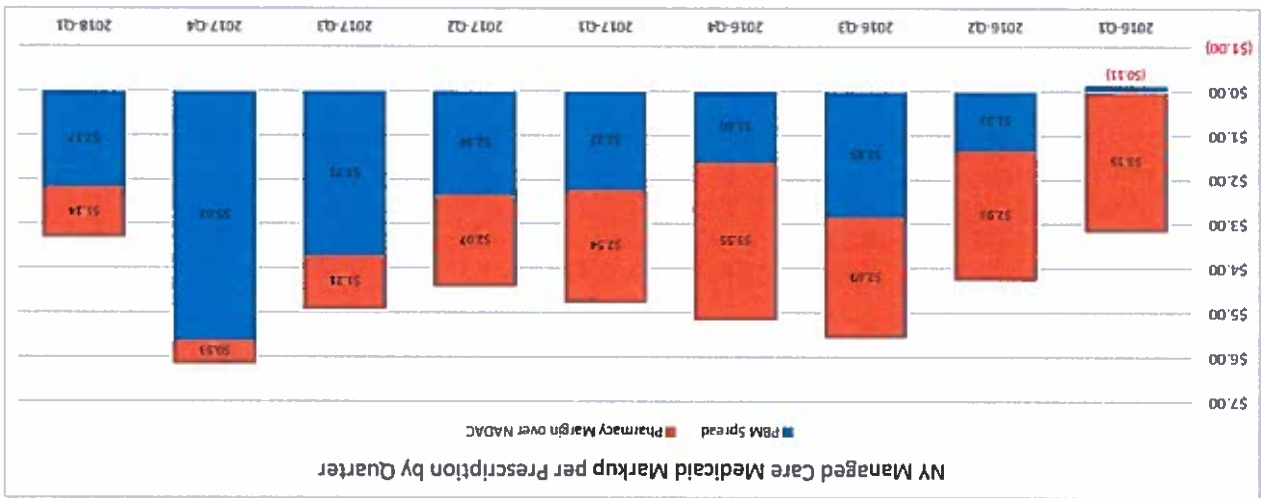


Figure 8: NY Managed Care Medicaid Markup per Prescription - All Generic Oral Solids

### 7.1.1 The pharmacy's cost to dispense does not seem to be considered in Managed Care

A third important takeaway from Figure 8 is that even in the highest markup quarter for the state (Q4 2017), the state still paid just \$6 per prescription for this weighted grouping of generic drugs. Had these prescriptions been dispensed in Fee-for-Service today, New York would have paid nearly \$4 more per claim to comply with CMS' final rule on Covered Outpatient Drugs.<sup>14</sup>

One of the key goals of CMS' final rule was to "create a fairer pharmacy reimbursement system."<sup>15</sup> Three of the summary takeaways of this portion of the final rule are as follows (reprinted from CMS' Fact Sheet on the final rule with emphasis added by 3 Axis Advisors):<sup>16</sup>

- Establishes actual acquisition cost (AAC) as the basis by which states should determine their ingredient cost reimbursement so payments are based on a more accurate estimate of the prices available in the marketplace, while still ensuring sufficient beneficiary access.

<sup>13</sup> Relative to NADAC

<sup>14</sup> <https://www.medicid.gov/medicaid-chip-program-information/by-topics/prescription-drugs/downloads/drug-fact-sheet.pdf>

<sup>15</sup> Ibid

<sup>16</sup> Ibid

- Implements the use of the term professional dispensing fee to ensure that the dispensing fee paid to pharmacies reflect the cost of the pharmacist's professional services and cost to dispense the drug product to a Medicaid beneficiary.
- Clarifies that states are required to evaluate the sufficiency of both the ingredient cost reimbursement and the professional dispensing fee reimbursement when proposing changes to either of these components.

On January 24, 2018, the NY Department of Health issued a press release entitled "Changes to Medicaid FFS Pharmacy Reimbursement" in which the Department communicated that starting February 22, 2018, it would be moving its Medicaid Fee-For-Service (FFS) pharmacy reimbursements to an acquisition cost plus professional dispensing fee model.<sup>17</sup> New York specified NADAC as the default acquisition cost benchmark and set the professional dispensing fee equal to \$10.08 per claim.<sup>18</sup> It follows then that New York believes pharmacies require roughly \$10 per claim of gross margin over NADAC to cover their cost to dispense. However, there is no requirement to cover a pharmacy's cost to dispense in Medicaid managed care. Based on Figure 8, it appears that this lack of oversight gives managed care PBMs the ability to reduce the weighted average cost of common generic drugs below the pharmacy cost to dispense, and simultaneously increase the fees they are extracting through spread.

## 7.2 ANALYZING "OVERCHARGED" VS. "UNDERCHARGED" GENERIC DRUGS

This analysis left an interesting open question. How could New York – in aggregate – be "saving money" on generics, but be overpaying so egregiously for individual drugs like Aripiprazole (as highlighted in Section 4)? In Q1 2018, NY managed care was charged nearly \$96 per prescription above NADAC for Aripiprazole 5mg, and yet somehow still only paid a paltry weighted average of \$3.31 per prescription above NADAC for generics included in this study.

To better understand how this dynamic came to pass, we divided all drugs dispensed into two categories:

1. "Overcharged Generics" – Drugs where the state was charged \$10 or more per prescription above NADAC in Q1 2018
2. "Undercharged Generics" – Drugs where the state was charged less than \$10 per prescription above NADAC in Q1 2018

We chose \$10 because, ultimately, the stated intention of the CMS Covered Outpatient Drug rule is for all drugs to be priced at a fixed dollar amount above acquisition cost. For New York, that number has been set at approximately \$10 per prescription, so any substantive deviation to that number is meaningful.

### 7.2.1 Overcharged Generics

Out of 915 generic oral solid drugs in our database in Q1 2018, New York paid \$10 or more above NADAC for 159 (17%) of them. We created a set out of these 159 drugs and calculated the weighted average cost per unit for each quarter using the same methodology described in 10.5: How the Data was Aggregated. Figure 9 (on next page) shows the results of this analysis.

<sup>17</sup> [https://newyork.thsc.com/downloads/providers/NYRx\\_DP\\_provider\\_notification\\_20180124a.pdf](https://newyork.thsc.com/downloads/providers/NYRx_DP_provider_notification_20180124a.pdf)

<sup>18</sup> [https://www.health.ny.gov/health\\_care/medicaid/program/update/2018/2018-11.htm#dispensing](https://www.health.ny.gov/health_care/medicaid/program/update/2018/2018-11.htm#dispensing)

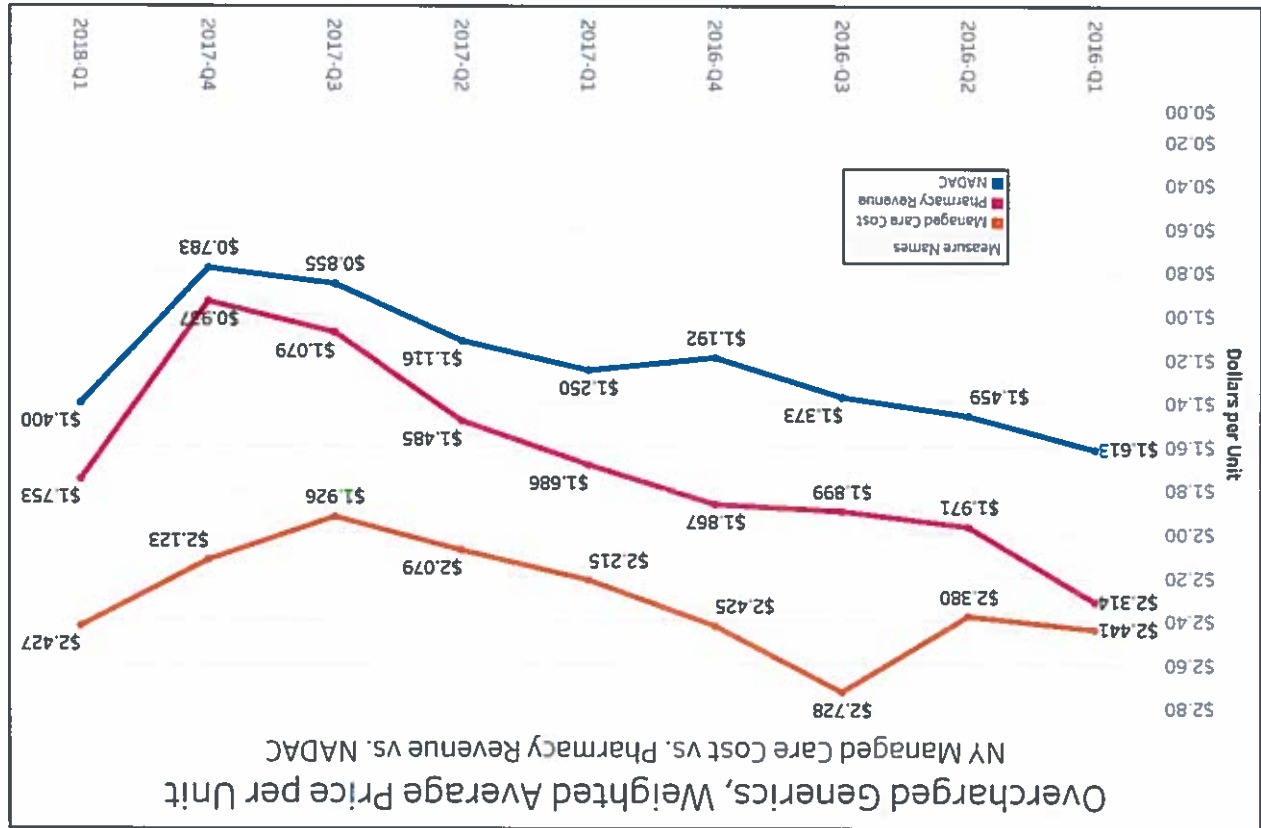


Figure 9: Generic Oral Solids Cost Comparison - Overcharged Generics

In Q1 2016, the state was paying a weighted average of \$2.441 per unit for this group of drugs, which was \$0.828 per unit (or \$37.04 per prescription) above NADAC. Interestingly, at this time, the PBM was paying out the majority of this margin to the pharmacy, with the pharmacy receiving \$2.314 per unit or \$31.55 per prescription for these generics. As such, the PBM spread was only \$5.49 per prescription.

As we move forward over the next two years, not much changed on unit cost from the state's perspective (orange line) despite more than 50% deflation in the acquisition cost of this group of generics. Meanwhile the pharmacy's reimbursement was cut more aggressively to just \$0.937 per unit by the end of 2017 – down 60% from the start of 2016. By Q4 2017, the weighted average PBM spread on these "overcharged generics" increased to nearly \$50 per prescription, up 8.5 times higher than the spread in Q1 2016.

In Q1 2018, the trend appears to break, with managed care cost, pharmacy revenue and NADAC all rising meaningfully. We were able to pin down the entirety of this cost increase to two drugs:

- Generic Viread (Tenofovir Disoproxil Fumarate)
- Generic Reyataz (Atazanavir Sulfate)

These two generic drugs – both prescribed for treatment of HIV-1 infection – were introduced to the generic market by Teva in December 2017.<sup>19</sup> Starting in Q1 2018, both drugs began appearing in New York's state utilization data in a very big way. Figure 10 (on next page) puts some perspective

<sup>19</sup> <https://www.drugstorenews.com/news/teva-announces-generic-reyataz-capsules/>  
<sup>20</sup> [https://www.tevapharm.com/news/teva-announces-exclusive-launch-of-generic-viread-in-the-united-states\\_12\\_17.aspx](https://www.tevapharm.com/news/teva-announces-exclusive-launch-of-generic-viread-in-the-united-states_12_17.aspx)

around exactly how much these two HIV-1 treatment drugs are being dispensed in NY Medicaid. New York Medicaid managed care spent \$14.5 million on these two drugs alone in Q1 2018, more than all other states combined.

See 13.2: Deep-Dive into Medicaid Rebates – Impact on Optimal Utilization for more detail on New York's unprecedented dispensing of these HIV-1 treatment generics, along with a discussion on what impact this could be having on New York's rebates.

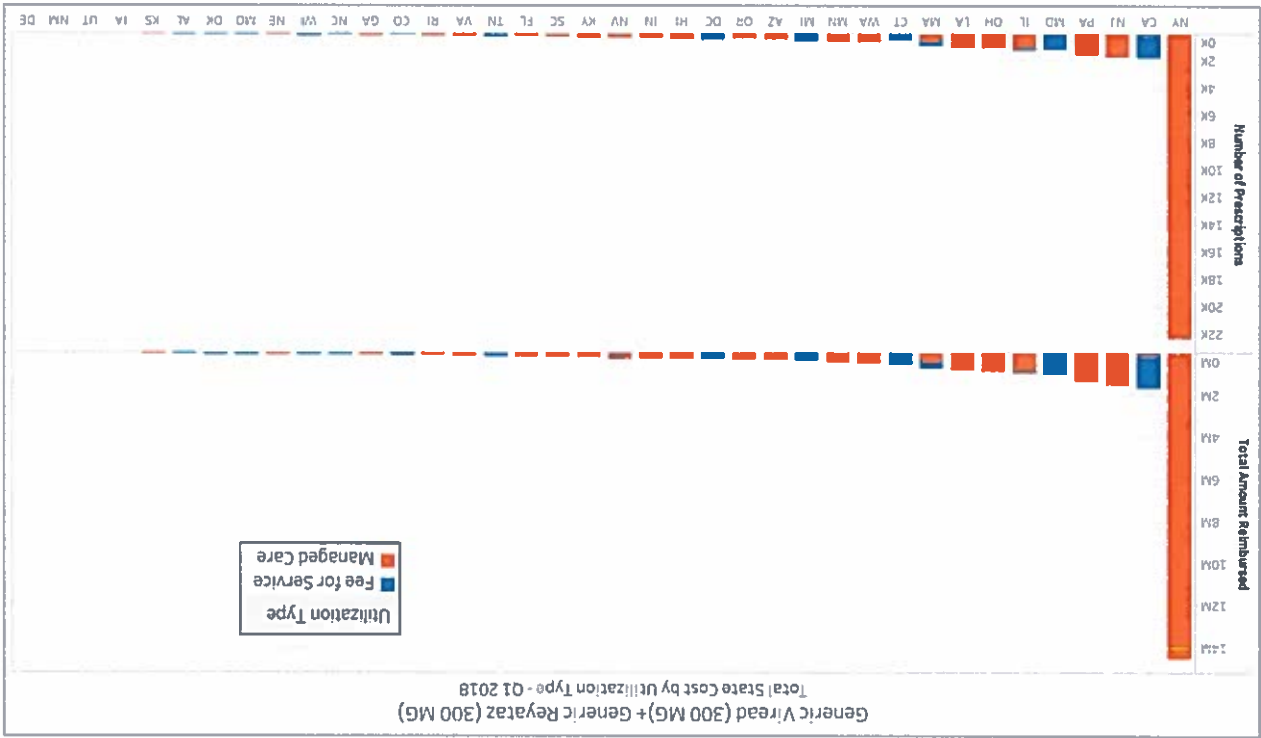


Figure 10: Generic Viread & Generic Reyataz Medicaid Spending by State - Q1 2018

We went back and took these two drugs out of the group of "overcharged generics" set to gauge the impact they have on weighted average unit costs in Q1 2018. As shown in Figure 11 (on next page), excluding these two drugs paints a very different picture in Q1 2018 – the sequential change is not nearly as notable as it originally appeared. New York's managed care PBMs successfully pushed the weighted average managed care unit cost down by 20% when compared with Q4 2017, but still took a spread of \$31.88 per prescription, while leaving the pharmacy with a margin of just \$7.84 per prescription above NADAC.

Overcharged Generics (excl. Viread/Reyataz)  
Weighted Average Price per Unit  
NY Managed Care Cost vs. Pharmacy Revenue vs. NADAC

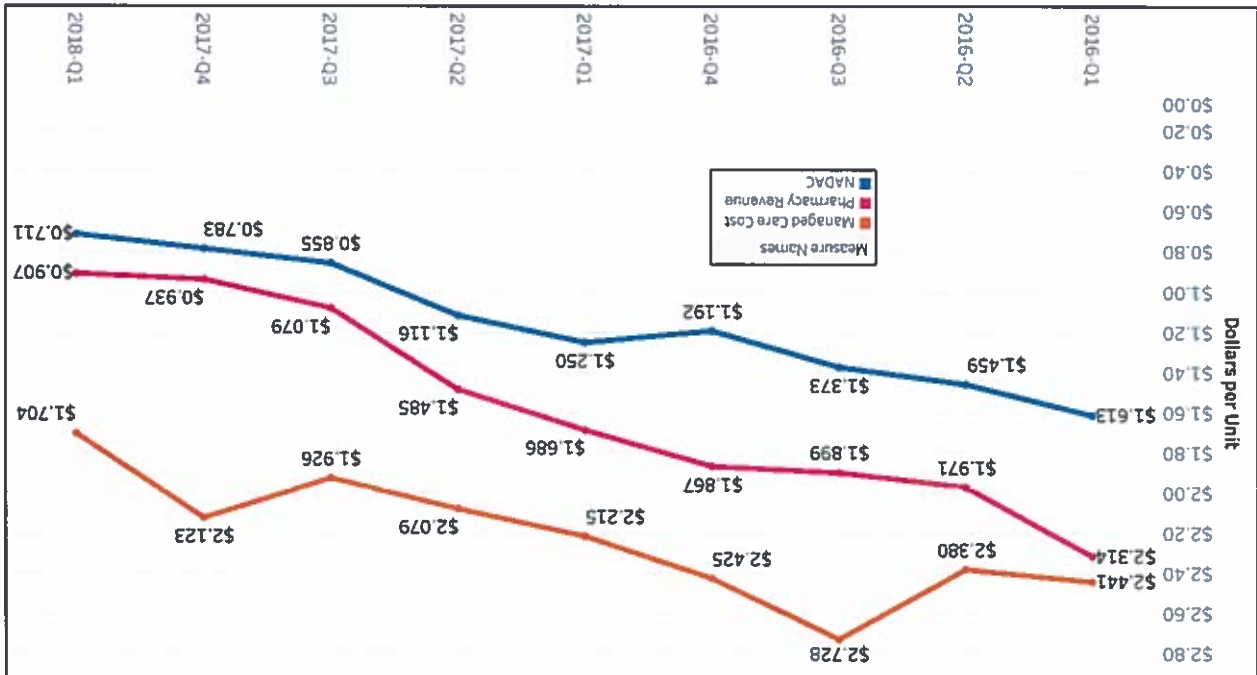


Figure 11 : Generic Oral Solids Cost Comparison - Overcharged Generics (excl. generic Viread and generic Reyataz)

Figure 12 summarizes both the PBM spread and pharmacy margin above NADAC per prescription for each quarter included in the study, after excluding these two HIV-1 treatment generic drugs. Again, while the state did see an improvement in overall cost, the revenue split per claim was still heavily weighted towards the PBM.

NY Managed Care Medicaid Markup per Prescription by Quarter

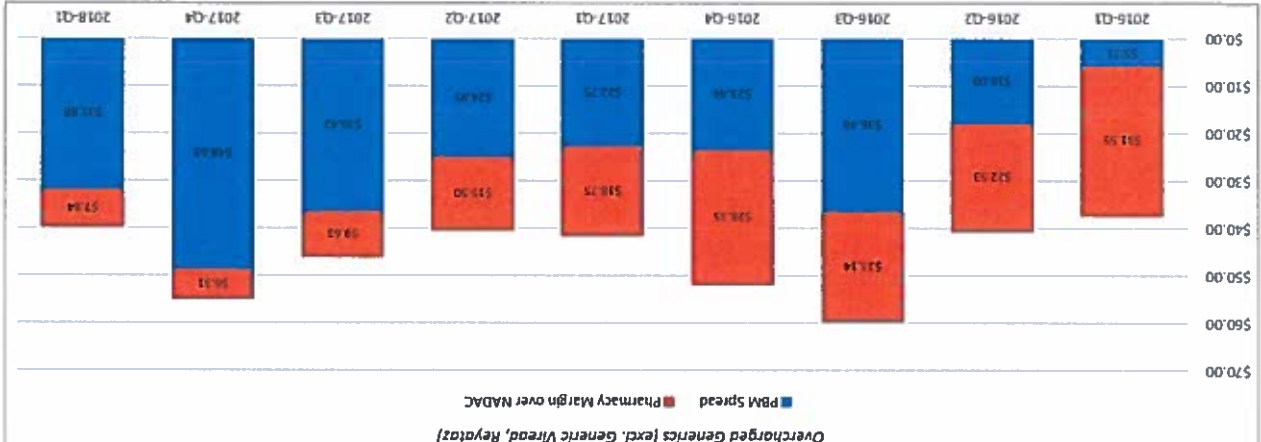


Figure 12 : NY Medicaid Managed Care Markup per Prescription - Overcharged Generics (excl. generic Viread and generic Reyataz)



7.2.2 Undercharged Generics

We created a second set of data with the remaining 756 generic drugs (83% of Q1 2018 generic oral solids) in our database where the state paid \$10 or less above NADAC. Figure 13 shows the trend of the weighted average per unit managed care cost, pharmacy revenue, and NADAC.

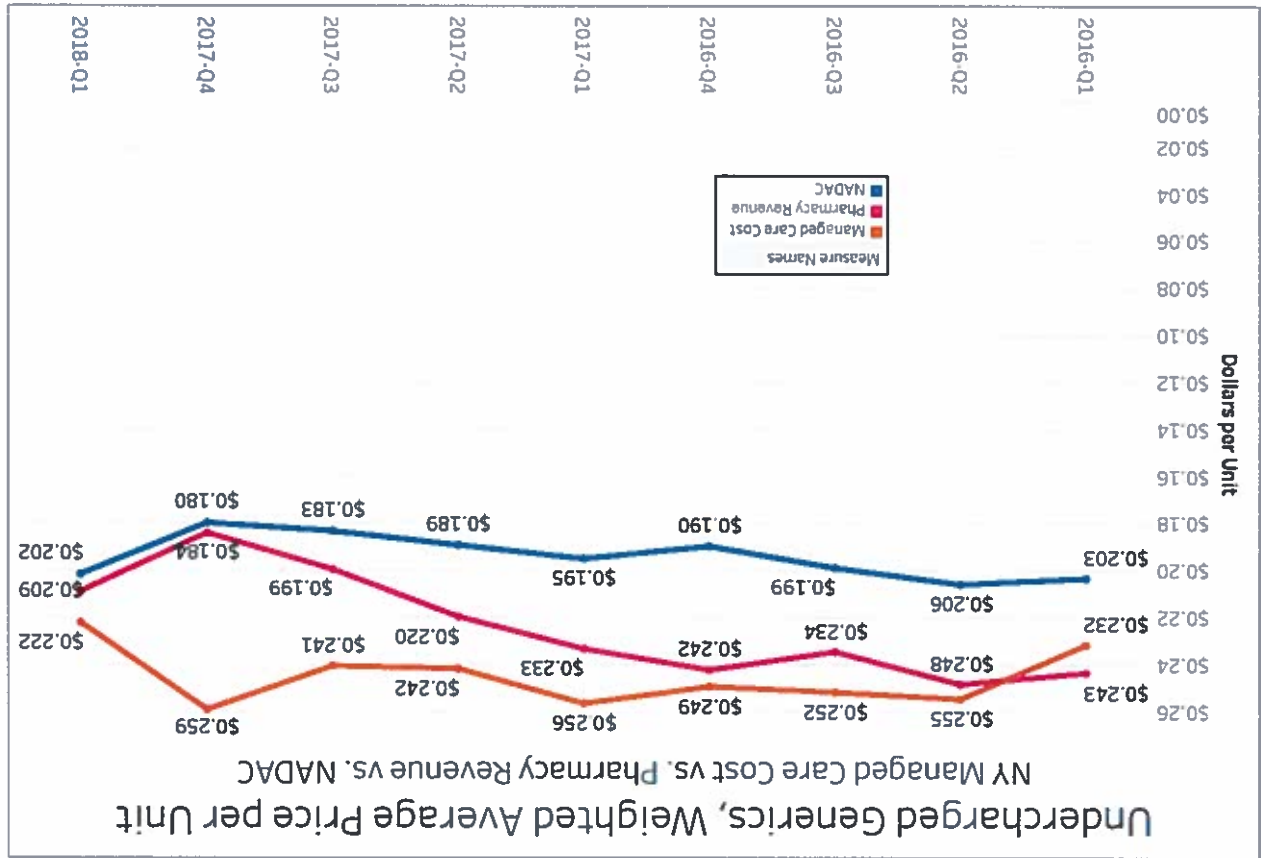


Figure 13: Generic Oral Solids Cost Comparison - Undercharged Generics

But without any transparency on how PBMs are reimbursing pharmacies for these claims, the data suggest that PBMs are cutting pharmacy reimbursements on the more expensive "overcharged generics" much faster than they pass through such savings to MCOs and the state. This results in the PBMs collecting a disproportionate amount of spread from the minority of "overcharged generic" claims. We estimate that in Q4 2017, 53% of all PBM spread on generic oral solids came from 6% of the claims. To make matters worse for New York pharmacies, PBMs appear to have meaningfully cut reimbursements on the more mature "undercharged generic" group in late 2017, collecting spread from this group of drugs as well. Taken together, both drove our estimate of PBM spread in Q4 2017 to a high of \$5.62 per claim.

In conclusion, the overwhelming majority of generic oral solid prescriptions NY managed care "purchased" fell into the undercharged generics group (>90%), which cost the state as little as \$0.76 above NADAC in Q1 2018. In other words, PBMs are setting prices for the state well below a fair market price (when pharmacy cost to dispense is included) for most generic drugs dispensed in managed care and passing through most of these savings to MCOs. This appears to be more than offsetting the significant overcharges on the <10% of prescriptions that fell into the overcharged generic category to net out to a weighted average price that is lower than it would be had these claims all been dispensed in Fee-for-Service at a \$10 per prescription rate.

Figure 14: NY Medicaid Managed Care Markup per Prescription - Undercharged Generics

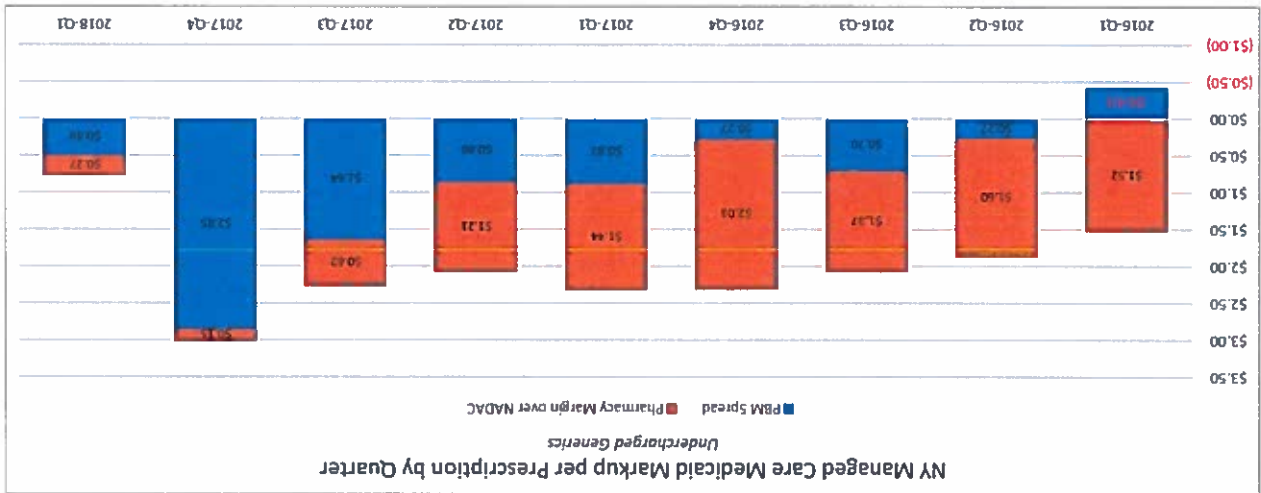


Figure 14 summarizes both the PBM spread and pharmacy margin per prescription for each quarter included in the study for the Undercharged Generic set.

## 8 Q4 2017 PHARMACY GROSS MARGIN ASSESSMENT

Within the period we studied, Q4 2017 was both a high point for PBM spread, and a low point for pharmacy gross margin. 3 Axis Advisors drilled deeper into the distribution of pharmacy gross margins within this quarter to assess the percentage of claims that were "underwater" relative to NADAC. To do this analysis, we took all generic oral solid claims dispensed by New York pharmacies in Q4 2017 and sorted them by gross margin (using NADAC as the proxy for pharmacy cost).

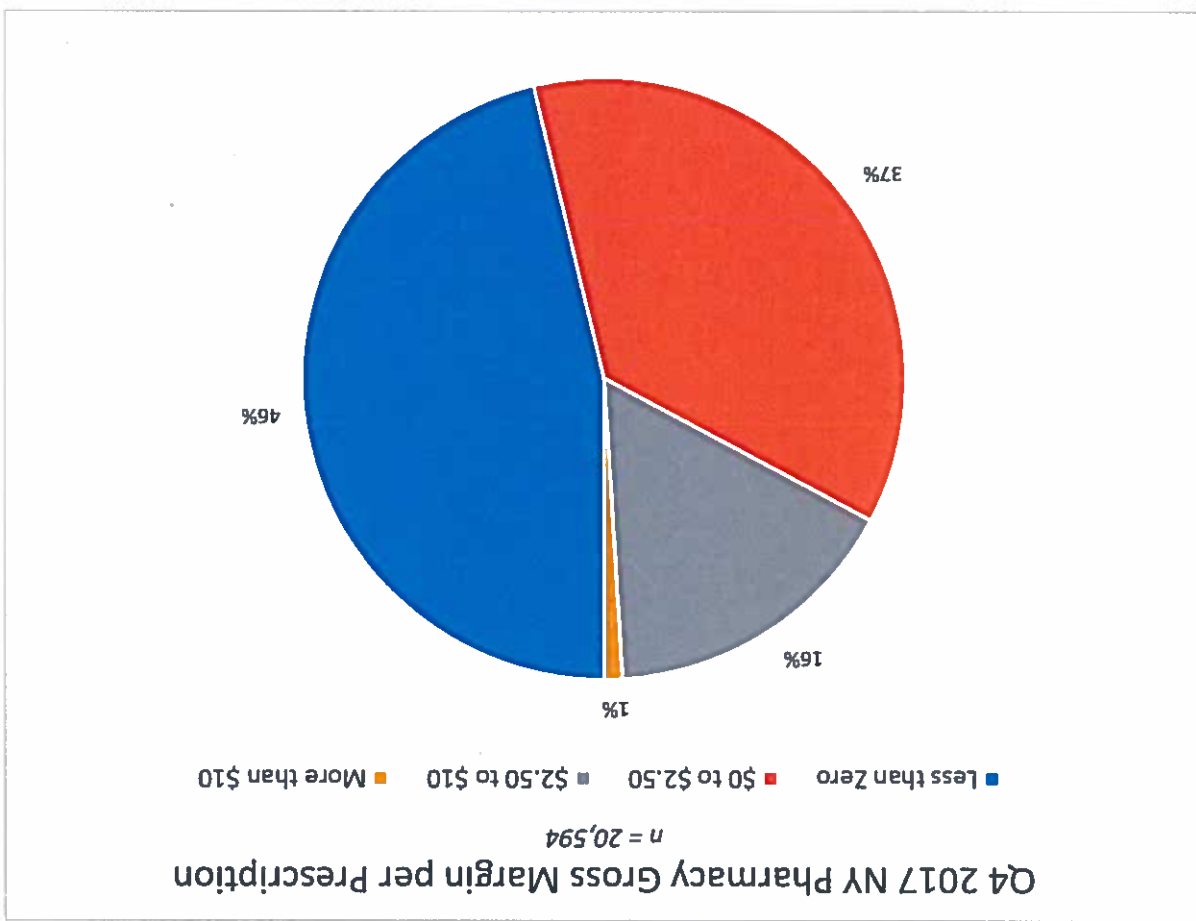


Figure 15 shows the results of this analysis. Out of 20,594 claims:

- 46% (or 9,402) were reimbursed below NADAC
- 37% (or 7,426) were reimbursed between \$0 and \$2.50 above NADAC
- 16% (or 3,299) were reimbursed between \$2.50 and \$10 above NADAC
- Only 1% (or 196) were reimbursed to the pharmacy above \$10 cost to dispense

In other words, 99% of all generic oral solid claims in Q4 2017 paid pharmacy less than its average cost to dispense.<sup>21</sup>

<sup>21</sup> [https://newyork.thsc.com/downloads/providers/NYRx\\_PDP\\_provider\\_notification\\_20180124a.pdf](https://newyork.thsc.com/downloads/providers/NYRx_PDP_provider_notification_20180124a.pdf)

## 9 CHANGE IN PHARMACY REIMBURSEMENTS VS. NADAC

The final analysis we conducted was to compare the change in reimbursements versus the change in NADAC over a set time period for a given plan. We were looking to assess whether changes in the PBM's Maximum Allowable Cost (MAC) rates for a specific plan moved in line with changes in market prices. We did not have enough data to perform an exhaustive analysis of each plan's month-to-month changes in reimbursements, but we wanted to at least explore one plan and one time period to see if the changes to pharmacy reimbursements were arbitrary in nature, or if they were tied closely to changes in market prices (as we measure using NADAC).

We decided to choose Fidelis Care, primarily given that we had the largest volume of claims to work with for this plan (72,771 claims altogether – See Figure 19 on page 25). We then chose two months: November 2016 was selected as the base month, and November 2017 was selected as the comparison month. We then found all NDC Descriptions<sup>22</sup> that had at least three prescriptions dispensed in both months. Overall, this left us with a list of 159 drugs, each with a pharmacy reimbursement per unit from Fidelis and a NADAC per unit in both months. Lastly, we put all the drugs into buckets based on the percentage change in both prices and compared them on the histogram presented in Figure 16. The blue series counts the number of generic drugs whose NADAC unit changed by the amount specified on the x-axis, while the orange series counts the number of drugs whose pharmacy revenue per unit changed by the specified amount.

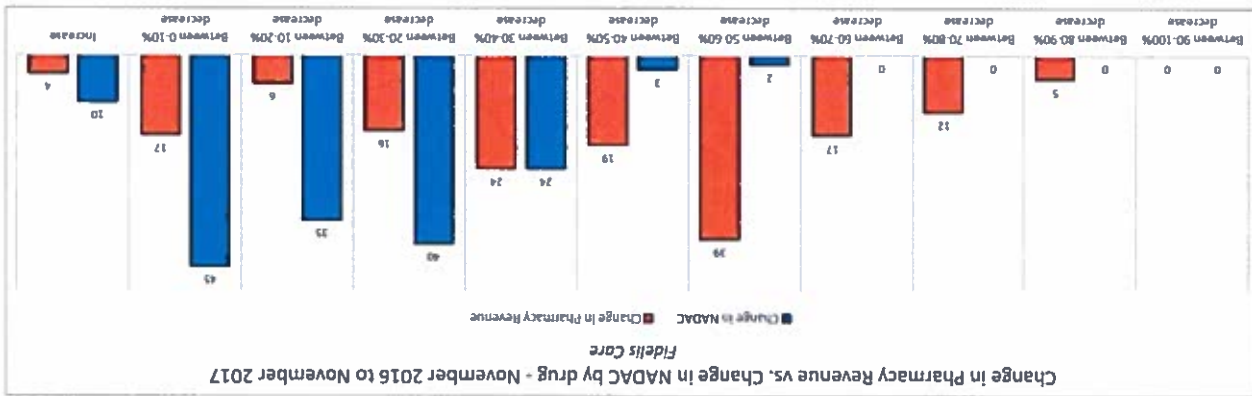


Figure 16: Change in Pharmacy Revenue vs. Change in NADAC by Drug - Nov 16-Nov 17 - Fidelis Care

Figure 16 shows a major disconnect between the pricing changes passed through by Fidelis to New York pharmacies relative to the changes in NADAC. We can see that most of the drugs in this analysis experienced a decline in NADAC of between 0-40% – only five drugs decreased by more than 40%. Against that backdrop, Fidelis decreased payments on 92 of the 159 drugs by more than 40%. While this analysis is far from comprehensive, it does raise questions on how PBM MAC pricing lists are set, what logic and incentives are driving the updates, and what protections should be in place for the pharmacy to ensure they are not subjected to arbitrary pricing movements that are meaningfully disconnected from changes in acquisition cost.

<sup>22</sup> An "NDC Description" is a combination of drug name, strength, and dosage form. Aripiprazole 5mg Tablet and Omeprazole 20mg Capsule are examples of NDC Descriptions.

## 10 DATABASE CREATION – PROCESS AND METHODOLOGY

To complete this study, 3 Axis Advisors created a database for New York that stitched together three different pricing benchmarks – the state payment, the pharmacy reimbursement, and the drug's average invoice acquisition cost. The steps we took to construct this database are as follows:

- 1) Obtain New York pharmacy reimbursement information
  - 2) Combine pharmacy reimbursement information with NADAC
  - 3) Identify Medicaid managed care claims, by MCO and PBM
  - 4) Combine pharmacy reimbursement/NADAC database with New York's State Drug Utilization Data
- The following subsections provide more detail on each step in the process.

### 10.1 STEP 1: OBTAIN NEW YORK PHARMACY REIMBURSEMENT INFORMATION

The first task we performed was to obtain reimbursement data from a representative sample of New York pharmacies. 3 Axis Advisors contracted independently with a geographically diverse sample of pharmacy owners across New York to gather and collect deidentified claims data with fill dates between January 1, 2016 and September 30, 2018. The only claim-level data fields utilized in this study were:

- Date prescription was filled
- National Drug Code (NDC) of drug dispensed
- Quantity dispensed
- Total reimbursement (all payers)
- Primary payer BIN, PCN, and Group

No Personal Health Information (PHI) was collected as part of this study.

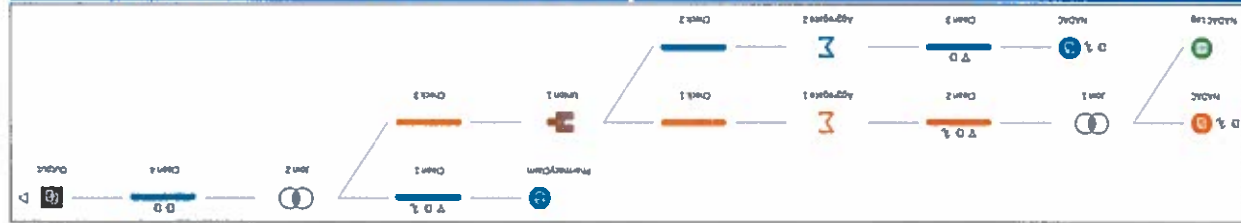
### 10.2 STEP 2: COMBINE PHARMACY REIMBURSEMENT INFORMATION WITH NADAC

3 Axis Advisors joined pharmacy reimbursement data together with NADAC – the benchmark chosen to estimate market-based invoice costs for pharmacies participating in the study. NADAC was developed by the Centers for Medicare and Medicaid Services (CMS), "to provide a national reference file to assist State Medicaid programs in the pricing of Covered Outpatient Drug claims to reflect the actual acquisition cost (AAC) of drugs."<sup>23</sup> As such, NADAC's goal is to be the most comprehensive public measurement of market-based retail pharmacy acquisition cost.

<sup>23</sup> <https://www.medicare.gov/medicaid/prescription-drugs/downloads/retail-price-survey/nadac-overview-operations.pdf>

NADAC is compiled by Myers & Stauffer on behalf of CMS. It is generated from a voluntary monthly invoice cost survey of 2,500 randomly-selected retail pharmacies (with 450-600 respondents). After Myers & Stauffer completes its data processing and clean-up activities, it publishes the survey results at the National Drug Code (NDC) level on Medicaid.gov. As of December 2018, the NADAC database included prices for 24,975 different NDCs. As such, we believe NADAC is the best publicly-available pricing benchmark to approximate average pharmacy invoice costs.<sup>24</sup>

We used Tableau Prep to stitch together our pharmacy claims database with CMS' NADAC database, constructing the "flow" as illustrated in the top section of Figure 17. The bottom portion of Figure 17 explains the purpose of each element within the database creation process.



Element	Type	Description
NADAC	Database	Raw NADAC database downloaded from Medicaid.gov (2014-2018 data)
NADAC Lag	Database	Table constructed to lag effect generic costs to correct for the lag time inherent in Myers & Stauffer's survey methodology
Join 1	Inner Join	Joins together NADAC and NADAC lag on "As of Date" to assign correct pricing month and quarter for generic drugs
Clean 2	Step	Filters to only generic drugs (to only lag correct generics)
Clean 3	Step	Filters to only brand-name drugs
Aggregate 1	Aggregate	Calculates the average NADAC for each generic NDC within each lag-corrected Month/Year
Aggregate 2	Aggregate	Calculates the average NADAC for each brand-name NDC within each Month/Year
Check 1 & 2	Step	Used to inspect aggregated data
Element	Type	Description
Union 1	Union	Combine the brand-name and lag-corrected generic NDCs back together
Check 3	Step	Used to inspect unioned data
PharmacyClaim	Database	De-identified, de-localized pharmacy claim reimbursement information
Clean 1	Step	Change data types, adjust to 11-digit NDC formatting, add Month/Year field based on claim date, misc. other data cleaning work
Join 2	Inner Join	Join together pharmacy claims information with NADAC information on NDC and Month/Year
Clean 4	Step	Remove extraneous data fields, inspect joined data
Output	Output	Create database

Figure 17: Tableau Prep Flow Diagram for Step 2 of Database Creation

This process resulted in a database containing 1,958,133 prescriptions dispensed by New York pharmacies between January 1, 2016 and September 30, 2018 with a corresponding NADAC. Of these claims, 1,721,480 or 87.7% were for generic drug prescriptions while 242,218 or 12.3% were for

<sup>24</sup> NADAC's main limitation is that it does not include off-invoice rebates that pharmacies may receive from wholesalers. Rebates lower the net cost to the pharmacy for many drugs and tend to be a percent discount off the invoice cost if a pharmacy meets various generic purchasing targets with its primary wholesaler. As such, NADAC should not be viewed as a reflection of pharmacy net costs – these will vary depending on pharmacy size and wholesaler contract terms. Anecdotally, rebates on generic drug purchases can reach up to 30-40% of invoice cost for larger pharmacies, but this value is partly offset by wholesaler requirements that prevent the pharmacy from shopping with other wholesalers for the best invoice price. In other words, there is nothing preventing the wholesaler from increasing the pharmacy's invoice cost to partly offset the rebate, resulting in an invoice cost that is above NADAC. Smaller pharmacies, pharmacies that choose to shop more aggressively for better invoice costs, or pharmacies that are predominantly buying from smaller wholesalers may receive rebates that are considerably lower than 30-40%, or there may be no rebates at all. All told, 3 Axis Advisors' qualitative research suggests that net average pharmacy acquisition cost is some discount to NADAC, but not as large as 30-40%. We believe that the restrictions placed on pharmacies by wholesalers, combined with above-NADAC invoice costs, are offsetting some portion of the rebate.

brand-name drug prescriptions. The combined monthly claims over this period for the pharmacies in our sample averaged 59,337 (Figure 18).

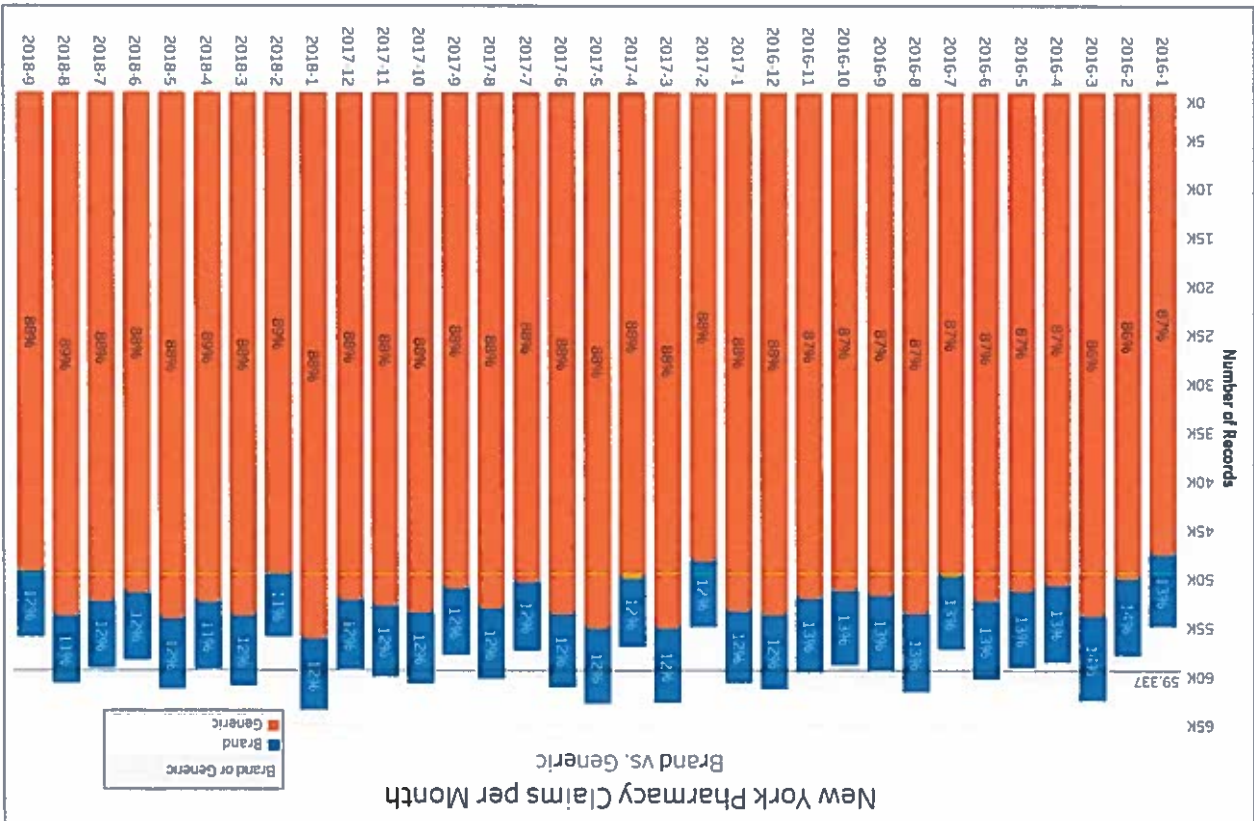


Figure 18: NY Pharmacy Claims per Month included in Database

### 10.3 STEP 3: IDENTIFY MEDICAID MANAGED CARE CLAIMS, BY MCO AND PBM

The third step in the process was to identify claims dispensed through a New York MCO over this period. To do this, 3 Axis Advisors obtained historical Managed Care Plan Information Charts dating back to 2016. All information sheets are presented in Appendices A through C. 3 Axis Advisors used these BIN Number / Processor Control Number (PCN) / Group definitions to identify New York managed care claims within the database created in Step 2.

As can be seen after inspecting these published lists, identifying managed care claims is not always an exact science. For plans that have had a stable BIN/PCN/Group definition over time and require the Group to be submitted as part of the claim – such as Fidelis Care or United Health – it’s a straightforward exercise: simply find all claims with this unique BIN/PCN/Group and label them with the appropriate plan name. Conversely, it is much more challenging to pinpoint managed care claims for a plan that does not require submission of a unique PCN or Group – such as Independent Health – especially given that we did not collect any PHI to drill down to the patient level.

All told, we used the information available to create a lookup table that was as comprehensive as possible to filter our database. Figure 19 (on next page) lists the sampled pharmacy claims by plan and PBM.<sup>25</sup> In

<sup>25</sup> It is much more straightforward to identify the PBM associated with each claim as PBMs are uniquely associated with each BIN Number

summary, there were 291,723 managed care claims, 14.9% of the overall claim volume collected over the period.

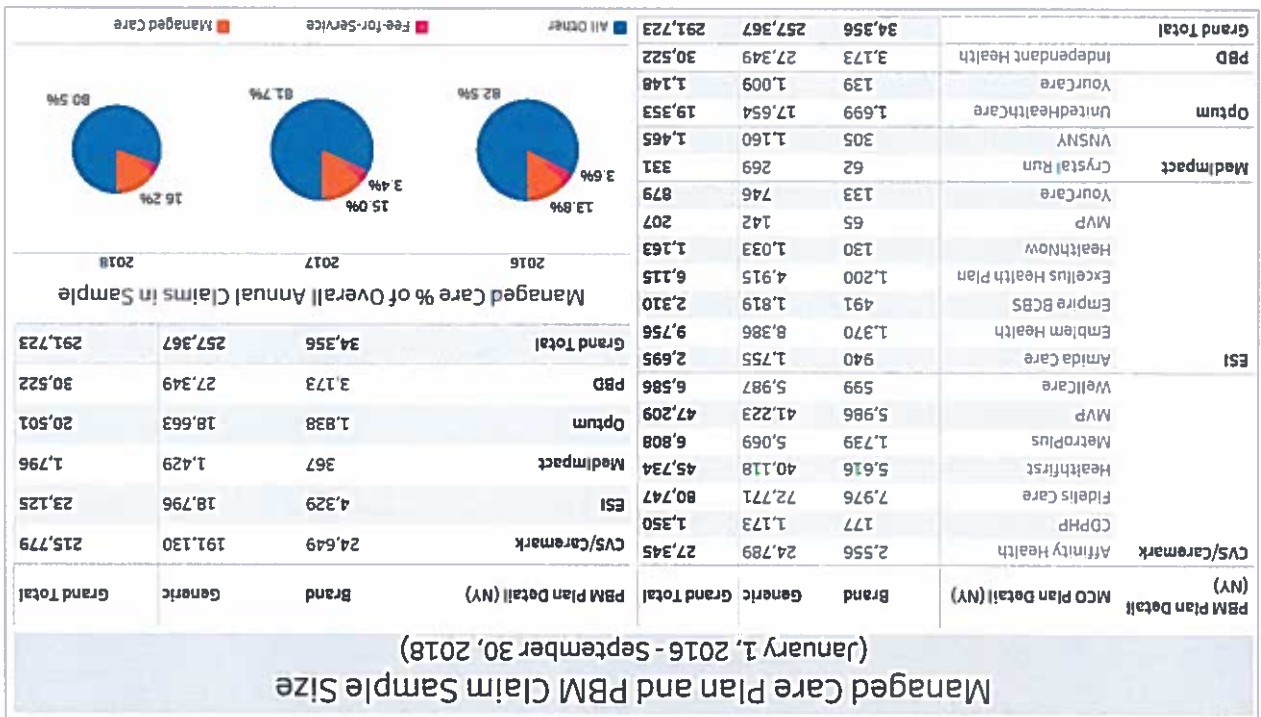


Figure 19: Managed Care Plan and PBM Claim Sample Size

### 10.4 STEP 4: COMBINE PHARMACY REIMBURSEMENT/NADAC DATABASE WITH NEW YORK'S STATE DRUG UTILIZATION DATA

The final step of the database creation process was to connect the payments reported to CMS by the state of New York that are publicly available in CMS' State Drug Utilization Database (SDUD).<sup>26</sup> States are required to report drug utilization for covered outpatient drugs paid for by state Medicaid agencies. Utilization is reported on a quarterly basis by states and published on Medicaid.gov approximately four months after the close of each quarter (i.e. Q2 2018 was published in late-October 2018). The database includes total dollars spent, units reimbursed, and prescriptions for each 11-digit NDC per quarter. Some of the SDUD's key limitations are as follows:

- SDUD's naming conventions for drugs are not clear. For example, if you are interested in understanding all of New York's spending on Aripiprazole 5mg tablets directly from SDUD, you would have to sift through 198 different drugs with product names of either "ARIPIPRAZO" or "ARIPIPAZOL" with no information on strength or dosage form. By connecting SDUD to the NADAC database, we gain visibility into market-prices for each NDC and add helpful drug nomenclature to be able to perform analysis with utilization data.
- SDUD does not specify the units of measure that states report to CMS for different NDCs. This introduces risk to any analysis that attempts to calculate unit costs in SDUD for drugs that are not oral-solids (i.e. inhalers, pens, drops, injectables, etc.) and compare these to other cost databases. Simply put, the units of measure could be different, which will lead to an apples-to-oranges unit

<sup>26</sup> <https://www.medicaid.gov/medicaid/prescription-drugs/state-drug-utilization-data/index.html>



cost comparison. To mitigate this risk, we limited the drugs in this study to oral solids (e.g. tablets and capsules) where the chance of a unit mismatch is negligible.

- In CMS' description of the "Total Reimbursement" data field, it explains, "as capitated payment arrangements are sometimes utilized by states and MCOs (managed care organizations), a zero value in this field could be appropriate for MCO data." Clearly, if units are reported without any expense, the data would be of no use for this analysis. However, this does not appear to be the case with New York's reported managed care data. Between Q1 2016 and Q1 2018 there were 140,047 unsuppressed<sup>27</sup> managed care NDC records. Of this data, only 62 records had a zero-cost reported and a non-zero number of units. Interestingly, this changed dramatically for NY in Q2 2018. Of the 15,984 unsuppressed managed care NDC records reported by the state, 13,349 had a zero-cost and a non-zero number of units. Due to this abrupt change in New York's reporting process, 3 Axis Advisors had to exclude Q2 2018 utilization data and focus the study on the Q1 2016 to Q1 2018 time period.

We again used Tableau Prep to stitch together the combined pharmacy claims / NADAC database with New York's SDUD, constructing the "flow" as illustrated in the top section of Figure 20. The bottom portion of Figure 20 explains the purpose of each element within the database creation process.



Element	Type	Description
Pharm+NADAC	Database	Combined NADAC and pharmacy reimbursement claim database
Clean 1	Step	Filter to Medicaid claims only. Separate managed care (MCO) from fee-for-service (FFS)
Aggregate 1	Aggregate	Aggregate claims by Medicaid Utilization Type (FFS or MCO), NDC, and Year/Quarter
Clean 2	Step	Inspect aggregated data. Calculate pharmacy reimbursement per unit. New York state utilization data downloaded from Medicaid.gov - 2016 through 2018
Output	Output	Create database
Clean 3	Step	Remove suppressed records. Remove incomplete Q2 2018 data. Calculate per unit reimbursements.
Join 1	Inner Join	Join databases together on NDC, Year/Quarter, and Medicaid Utilization Type
Clean 4	Step	Inspect joined database. Add flag for oral solids.
Element	Type	Description

Figure 20: Tableau Prep Flow Diagram for Step 4 of Database Creation

This last step in the database creation process reduced our final sample down to 178,614 managed care oral solid claims, of which 169,084 are claims for generic drugs. Altogether, the final database includes state payments, pharmacy reimbursements, and NADAC benchmark pricing for 1,544 different NDC Descriptions spanning nine quarters (Q1 2016 – Q1 2018).

<sup>27</sup> To comply with the HIPAA Privacy Act, CMS suppresses the expense, number of units, and number of prescriptions for all NDCs where less than 11 prescriptions were dispensed in any given quarter.

## 10.5 HOW THE DATA WAS AGGREGATED

All three weighted average price points – state payments, pharmacy reimbursement, and NADAC – were calculated using the *same drug mix* to ensure an apples-to-apples comparison across the three series. We

used a drug mix based on New York's NDC-level managed care state utilization data to weight each of the three benchmark costs. In other words, we multiplied NDC-level unit volumes from New York's state utilization data by each of the three per-unit costs, added up the costs, and divided by the total units in the state utilization data for all NDCs present in our combined database. For an illustration of this calculation, see *Figure 21*.

We chose to use the state's drug mix instead of the collective pharmacy mix to remove distortions that could be caused by differences in any individual pharmacy's drug mix relative to the state's overall managed care mix. We'll return to the example in *Figure 21* to better illustrate the impact that mix can have on this analysis. In our hypothetical example, we have three drugs – NDC 1, NDC 2, and NDC 3. We can see that on an absolute basis, NDC 2 has the most spread (\$0.20 per unit) but it is only 8% of the state's overall utilization. On the other hand, NDC 3 only has a \$0.02 spread, but it is 60% of the state's utilization. Given the disproportionately large utilization of NDC 3, it will have an outsized impact on the state's weighted average cost (\$0.38 per unit), and the resulting spread (\$0.07 per unit).

Figure 21 : Data Aggregation Illustration 1

Q1 2016	NDC 1			NDC 2			NDC 3			Total		
	Dispensed Units (NY MCO)	% of Total	Managed Care Cost	Pharmacy Revenue	NADAC	Weighted Average Cost per Unit	Dispensed Units (NY MCO)	% of Total	Managed Care Cost	Pharmacy Revenue	NADAC	Weighted Average Cost per Unit
24,000	32%	\$0.44	\$0.95	\$0.28	\$0.28	\$0.38	45,000	60%	\$0.30	\$0.75	\$0.26	\$0.31
6,000	8%	\$0.44	\$0.95	\$0.28	\$0.28	\$0.38	75,000	100%	\$0.44	\$0.95	\$0.28	\$0.38
\$10,560		\$10,560	\$5,700	\$12,600	\$28,860		\$6,720		\$6,720	\$3,300	\$16,320	
\$7,200		\$4,500	\$11,700	\$23,400		\$7,200		\$4,500	\$11,700	\$23,400		
\$6,720		\$3,300	\$6,300	\$16,320		\$6,720		\$3,300	\$6,300	\$16,320		
												\$0.22

Now let's assume that the pharmacies in this study collectively serve a patient base that is heavily weighted towards individuals that are being treated with NDC 2. As such, the pharmacy's mix, as shown in *Figure 22*, may look very different than the state's mix. In our

NDC 2 and NDC 3 – NDC 2 now is 60% of the "mix" while NDC 3 is 8%. The impact of the spread on NDC 2 is now much more significant on an overall basis, bringing the weighted average cost for this mix up to \$0.73 per unit, with a pricing spread of \$0.16 per unit.

To avoid this type of mix distortion, it was critical that we use the pharmacy information acquired as part of this study only to derive NDC-level unit revenue and rely on the state's publicly-reported utilization for our mix.

Figure 22: Data Aggregation Illustration 2

Q1 2016	NDC 1			NDC 2			NDC 3			Total		
	Dispensed Units (NY MCO)	% of Total	Managed Care Cost	Pharmacy Revenue	NADAC	Weighted Average Cost per Unit	Dispensed Units (NY MCO)	% of Total	Managed Care Cost	Pharmacy Revenue	NADAC	Weighted Average Cost per Unit
240	32%	\$0.44	\$0.95	\$0.28	\$0.28	\$0.73	450	60%	\$0.30	\$0.75	\$0.26	\$0.57
60	8%	\$0.44	\$0.95	\$0.28	\$0.28	\$0.73	750	100%	\$0.44	\$0.95	\$0.28	\$0.73
\$106		\$106	\$428	\$17	\$550		\$67		\$67	\$248	\$8	\$323
\$72		\$338	\$16	\$425		\$72		\$338	\$16	\$425		
\$67		\$248	\$8	\$323		\$67		\$248	\$8	\$323		
												\$0.43

### 10.6 DATA VALIDATION

Due to the limitations in the state utilization data, it was especially important to validate the finished database before using it to analyze generic spread pricing. Conveniently, the database includes a built-in validation mechanism – brand-name drugs.

In Medicaid, spread is predominantly a managed care generic drug phenomenon. As discussed earlier, this is the case because of the latitude the PBM has within different contracts between the payer and the pharmacy to price generics differently and capture the arbitrage between the two price points, both of which they control. For brand-name drugs, this is not the case because both payer and pharmacy contracts tend to be based on the same benchmark – AWP – and AWP is strongly correlated to NADAC for brand-name drugs.<sup>28</sup> In other words, for brand-name drugs, AWP acts much more like a “market price,” at least before factoring in rebates to the supply chain.<sup>29</sup> As such, brand-name drugs become a good validation point for our data set. All three price points – state payment, pharmacy reimbursement, and NADAC – should line up closely for brand-name drugs, and trend together over time.

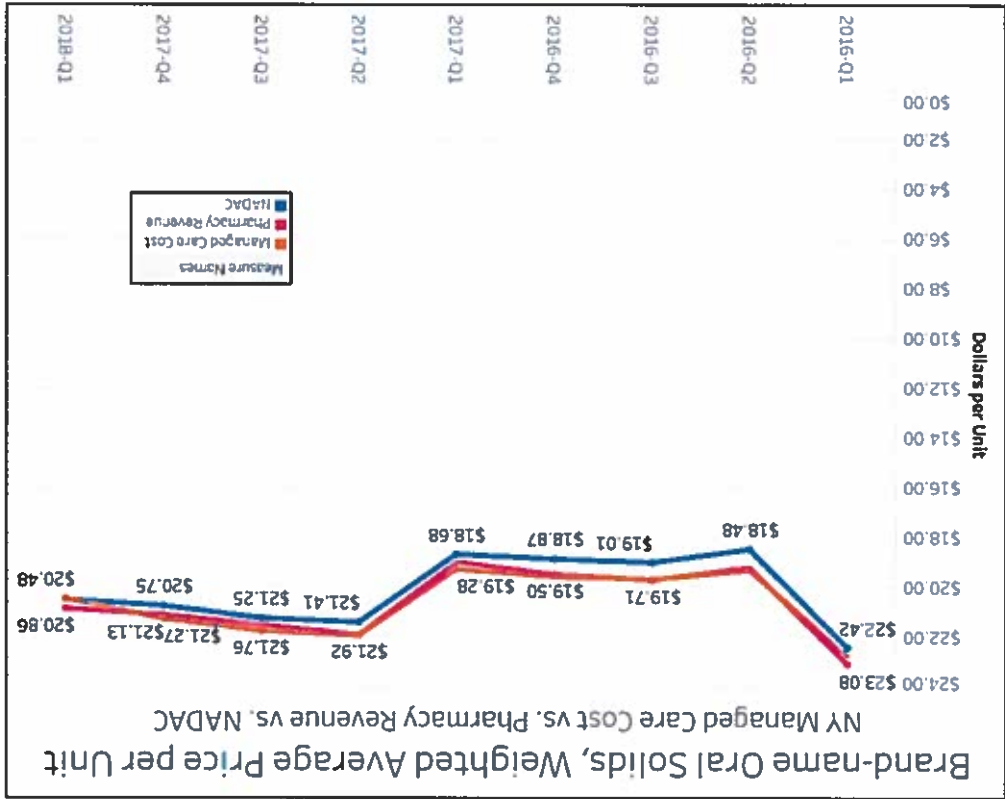


Figure 23: Brand-name drug cost comparison

And this is exactly what we find in the data. Figure 23 shows the comparison of the weighted average of the per unit cost of the per unit cost benchmarks for all brand-name oral solid drug claims in the database. The state payment and pharmacy reimbursement are practically identical, and at only a very slight premium (~2%) to the weighted average NADAC cost per prescription. Figure 24 (on next page) drills down to the NDC Description level to better understand the relationship between what NY managed care paid for brand-name oral solids and what PBMs paid out to pharmacies on managed care claims. The y-axis is the state payment per unit, while the x-axis is the pharmacy revenue per unit. The analysis was performed for all brand-name oral solids dispensed at the NY pharmacies included in our study in 2017. As the chart clearly shows, there is a near perfect correlation between the state managed care payment and the

<sup>28</sup> <https://www.medicare.gov/medicaid/prescription-drugs/downloads/retail-price-survey/nadac-equiv-metrics.pdf> Of course, the true price obfuscation on brand name drugs come in the form of rebates, which are beyond the scope of this report. But due to the more transparent nature of Medicaid rebate program, this tends to be less of an issue for Medicaid than it is for Medicare Part D or commercial plans.

pharmacy revenue ( $R^2 = 0.9997$ ). This confirms that there is no material pricing arbitrage being exploited within brand-name drugs, as we expected given the more aligned nature of the PBM contracts on either side of the transaction.

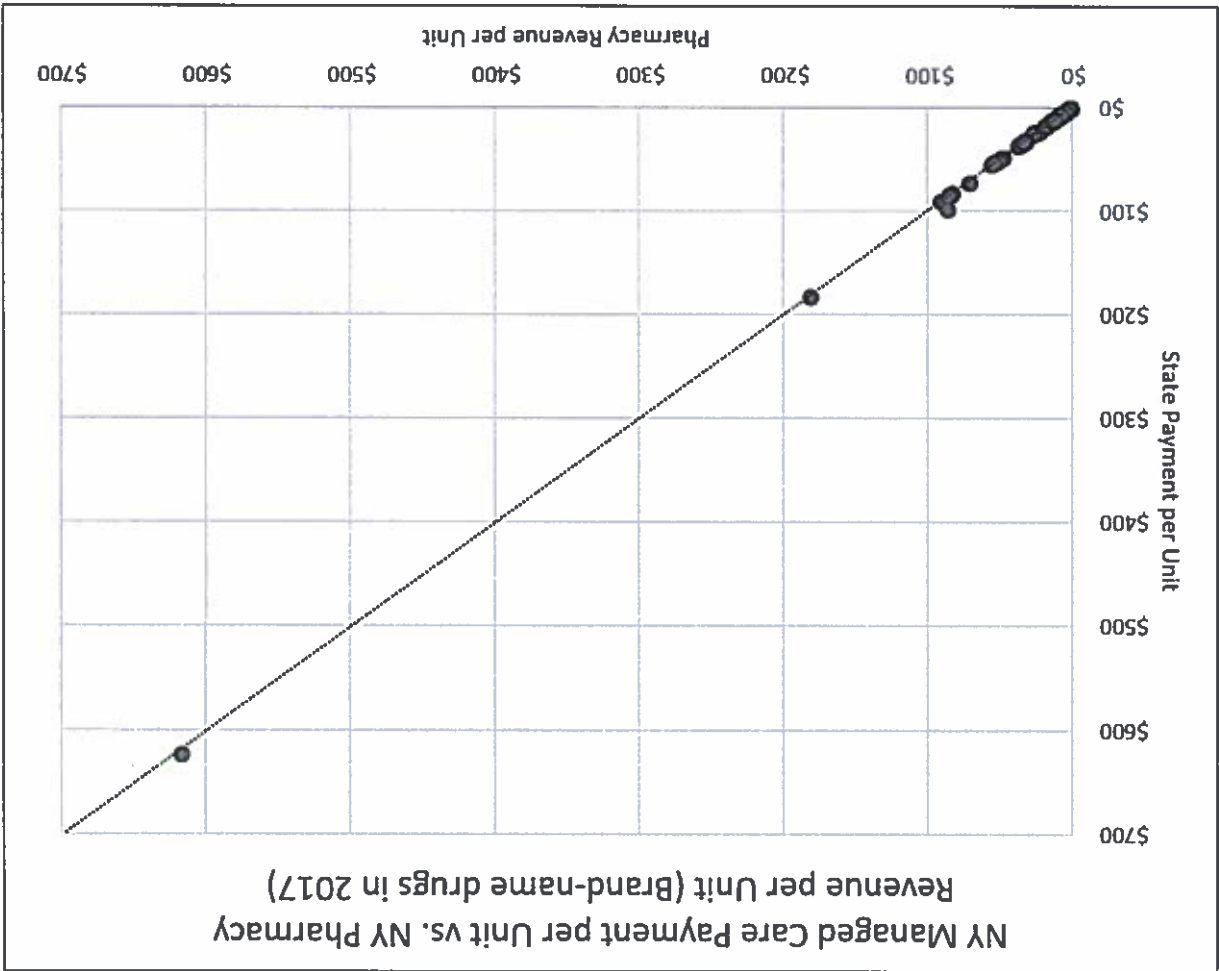


Figure 24: NY Managed Care Cost vs. NY Pharmacy Revenue per Unit - Brand-name drugs

## 11 STUDY ASSUMPTIONS, LIMITATIONS AND MITIGATING FACTORS

This goal of this study was to illustrate and approximate spread pricing within NY Medicaid managed care. Without having complete claim-level detail, 3 Axis Advisors had to make several assumptions to create the database that was used to assess spread pricing, as detailed in section 10: Database Creation – Process and Methodology. In this section, we call specific attention to some of these key assumptions and study limitations. We also explain factors that mitigate the impact of our assumptions and enhance the relevance of this study.

Ultimately, we strongly recommend that New York conduct a full audit of its managed care pharmacy program to confirm and build upon the findings of this study using a more comprehensive dataset.

### 11.1 SAMPLE SIZE AND NDC COVERAGE

The key limitation of this study is that we do not have complete coverage of all the NDCs New York managed care dispensed in any period. In order to have complete NDC coverage, we would need access to claims data for every pharmacy in New York, rather than for a geographically diverse sample.

To assess the impact of this limitation, we counted all NDCs and NDC Descriptions covered in the study in each period and compared them to the overall count of NDCs and NDC Descriptions in New York Medicaid managed care. We then calculated the total spending in NY Medicaid managed care on the NDCs captured in the study and compared that to NY Medicaid managed care's overall generic spending. Figure 25 shows the results of this analysis. In any given quarter, the study captures 2,000-2,500 NDCs that roll up to 800-900 NDC Descriptions representing between \$87 million and \$93 million in gross spending. These NDCs are responsible for roughly 50% of New York managed care's overall spending on generic oral solids, and 30% of New York's overall spending on all generic drugs.<sup>30</sup>

National Drug Code (NDC)	NDC Descriptions		Total Amount Reimbursed	
	% of NDCs	% of TCO	% of NDCs	% of TCO
2016-Q1	22%	22%	46%	26%
2016-Q2	17%	22%	48%	29%
2016-Q3	18%	23%	50%	30%
2016-Q4	18%	24%	46%	28%
2017-Q1	18%	24%	47%	27%
2017-Q2	19%	24%	50%	28%
2017-Q3	19%	24%	47%	27%
2017-Q4	19%	24%	48%	27%
2018-Q1	19%	25%	54%	29%

Figure 25: Study Coverage of Overall NY Managed Care Dispensing Data

Unfortunately, with the challenges that community and independent pharmacies have dispensing specialty drugs,<sup>31</sup> we suspect that some of the more expensive specialty drugs could be missing from our study, which could potentially result in an underestimation of PBM spread.

<sup>30</sup> This comparison is relative to only NDCs that are present in the NADAC database. Roughly 97% of all generic NDCs are present in the NADAC database.  
<sup>31</sup> <https://www.dispatch.com/news/20180603/pharmacist-says-cvs-strong-arms-cancer-drug-business/>

## 1.2 LIMITATIONS OF CMS' STATE UTILIZATION DATABASE

We used CMS' state utilization database (SDUD) to obtain gross costs by NDC to New York Medicaid managed care. There are four main limitations of this database:

- 1) It does not specify the MCO – only managed care or fee-for-service
- 2) It is only produced on a quarterly basis with aggregated pricing data
- 3) Spending on several NDCs are suppressed
- 4) Units of measure are not specified

### 1.2.1 No Specification of MCO

Ideally, we would have liked to match state cost to pharmacy reimbursement for each individual MCO, but without this level of detail in the SDUD, we instead aggregated all pharmacy data to the overall managed care level to compare with the reported state costs. This introduces error in the comparison because there will be times where we are comparing a weighted average pharmacy reimbursement comprised of one mix of plans with state costs aggregated from a different mix of plans.

The mitigating factor is that New York's overall managed care plan mix appears to be heavily biased towards one PBM – CVS/Caremark, reducing the risk that we have a dramatically different plan mix for any given NDC. Another mitigating factor was that we performed this analysis over a period of nine quarters. While this data limitation could be distorting any individual quarter, it is likely distorting all nine quarters in a similar fashion. As such, we believe that the substantial change in reimbursements and spread from the start of 2016 to the end of 2017 is very meaningful.

### 1.2.2 Data is only provided on a quarterly basis with aggregated pricing data

State utilization data is only provided on a quarterly basis for each NDC. This creates a potential timing error in comparing state utilization data (which is a true quarterly average) to pharmacy data (which is derived from discrete points in the quarter).

While this could add some error to any individual quarter's absolute spread estimate, the error should be substantially lower when looking at the relative analysis over the study's nine quarter span.

### 1.2.3 Spending on several NDCs are suppressed

To comply with the HIPAA Privacy Act, CMS suppresses the expense, number of units, and number of prescriptions for all NDCs where less than 11 prescriptions were dispensed in any given quarter. As such, the raw spending information available in the state utilization data that we used does not reflect the full spending by New York Medicaid managed care.

### 1.2.4 Units of measure are not specified

SDUD does not specify the units of measure that states are reporting to CMS for different NDCs. This introduces risk to any analysis that attempts to calculate unit costs in SDUD for drugs that are not oral solids (i.e. inhalers, pens, drops, injectables, etc.) and compare them to other cost databases. Simply put, the units of measure could be different, which will lead to an apples-to-oranges unit cost comparison. To mitigate this risk, we chose to limit the drugs analyzed in this study to oral solids (e.g. tablets and capsules) where the chance of a unit mismatch is negligible.

### 1.3 LIMITED NUMBER OF RECORDS FOR ANY GIVEN NDC / QUARTER

The final data sample utilized for this study averaged 18,787 NY Medicaid managed care generic oral solid prescriptions covering 2,325 distinct NDCs per quarter. This is an average of just over eight prescriptions per NDC from which we used to derive the average pharmacy managed care reimbursement. We believe this is more than enough data to draw meaningful conclusions from due to the unique nature by which pharmacies contract with PBMs. Community and independent pharmacies are typically too small to directly contract with most PBMs. Instead pharmacies will contract with a Pharmacy Services Administration Organization (PSAO), in effect gaining access to a collection of pre-negotiated contracts with PBMs. According to Adam Fein at Drug Channels, "Nearly all smaller pharmacies participate in pharmacy services administrative organizations (PSAOs) to leverage their influence in contract negotiations with PBMs and other third-party payers."<sup>32</sup> The four largest PSAO networks have collective membership of over 19,000 pharmacies nationwide, covering roughly 80% of all pharmacies that utilize a PSAO. Moreover, channel checks indicate that contracting terms do not materially differ across PSAOs for the large managed care PBMs – we believe the predominant PBMs are simply too large for any one PSAO to gain preferential contracting terms. Nevertheless, this study captures claim volume from three of the top four PSAOs, in addition to two of the smaller PSAOs, giving us more confidence using a smaller NDC-level sample size to estimate overall NY Medicaid managed care community pharmacy reimbursements.

### 1.4 STATE REBATES ON GENERIC DRUGS NOT INCLUDED

This study does not include NY Medicaid managed care rebates on generic drugs. We do not see this as a legitimate study limitation because state rebates on generic (non-innovator) drugs are independent from the gross cost to the state. The rebate is a fixed 13% of Average Manufacturer Price (AMP),<sup>33</sup> an altogether different pricing benchmark that is not influenced by the state's reported gross cost. In result, the state will receive the same rebates no matter the unit cost its managed care organizations report. We believe this fact makes the consideration of rebates irrelevant to this study.

### 1.5 LARGE CHAIN REIMBURSEMENTS ARE NOT CAPTURED IN OUR DATABASE

This study only attempts to estimate the percentage spread based on community and independent pharmacy reimbursements. In Ohio, HDS found that CVS/Caremark paid its own CVS pharmacies 3.4% less on generic drugs than it paid to Ohio community/independent pharmacies.<sup>34</sup> Whether the money goes to CVS pharmacies or Caremark is largely irrelevant as they are both part of CVS Health. But this does raise the question on how much Caremark is paying to large chain competitors such as Walgreens and Rite Aid. If large (non-CVS) chain reimbursements in New York are lower than independent pharmacy reimbursements, this study could underestimate actual spread in New York Medicaid managed care.

<sup>32</sup> <https://www.drugchannels.net/2018/04/mckesson-leads-another-round-of-psao.html>  
<sup>33</sup> Starting in Q1 2017 a CPI penalty was also added to the generic rebate formula  
<sup>34</sup> <https://cvshhealth.com/newsroom/press-releases/cvs-health-statement-on-pc-auditor-general-report-on-pbms>

## 12 SUMMARY AND CONCLUSIONS

This study was commissioned and funded by the Pharmacists Society of the State of New York (PSSNY) to estimate the nature and extent of spread pricing within the New York Medicaid managed care program. Further, the objectives are to explain the nature of a pharmacy transaction, illustrate how spread is impacting both payer and pharmacy, and estimate spread on generic drug claims using a limited, but robust, sample of pharmacy data.

To estimate the nature and extent of spread pricing in New York Medicaid managed care, we collected nearly two million prescription claims from pharmacies across New York. Of these claims, there were nearly 170,000 generic oral solid (e.g. tablets and capsules) prescriptions dispensed between January 1, 2016 and March 31, 2018. Based on this sample, pharmacy unit revenue was compared to publicly-available datasets from the Centers for Medicare & Medicaid Services (CMS) that measure state drug costs (State Utilization Data) and pharmacy acquisition cost (National Average Drug Acquisition Costs, or NADAC). For generic oral solid drugs in New York Medicaid managed care, the key findings related to PBM spread were:

- In 2016, aggregate PBM spread was 10%
  - In Q1 2016, there was no PBM spread
  - In Q4 2017, PBM spread was 39% of overall generic spend, or \$5.62 per claim
  - Between April 1, 2017 and March 30, 2018, PBM spread was 24% of overall generic spend
    - In comparison, Ohio's Auditor found a 31% spread over this period on generic claims
  - Between Q1 2016 and Q4 2017, NY managed care PBMs cut pharmacy gross margin by 83%. This resulted in an average margin (relative to NADAC) of \$0.53 per prescription for pharmacies – 5% of the state's \$10.08 per prescription cost to dispense in Medicaid Fee-for-Service<sup>35</sup>
- The data suggest that New York managed care PBMs are pricing most generic drugs below a pharmacy's cost to dispense and potentially using these savings to subsidize spread pricing on the remaining generic drugs
  - More than 50% of the PBM's Q4 2017 spread came from just 6% of the dispensed generic drug claims

Additional findings of this study were:

- In Q4 2017, 99% of all generic oral solid pharmacy claims generated a margin of less than \$10 (cost to dispense) for the pharmacy
- We found no evidence of a correlation between the change in pharmacy reimbursement and the change in pharmacy acquisition cost for Fideis (PBM = CVS/Caremark) – the largest MCO in our study – raising questions on what is driving updates to the PBM's proprietary pricing lists

A limitation of the study was the lack of publicly-available claim-level data for all NY Medicaid managed care claims. This restricted our ability to analyze the full population of claims to precisely calculate PBM spread in NY Medicaid managed care. This level of precision is only possible with a comprehensive audit commissioned by either the State Comptroller, Department of Health or other auditing authority. This study strives to evaluate pricing distortions in NY Medicaid managed care and estimate and visualize spread pricing using the data analytics techniques and assumptions described in detail throughout this report.

**We highly recommend that the state of New York conduct a full audit of its managed care pharmacy program to confirm the findings of this study using a more comprehensive dataset.**



## 13 OPEN QUESTIONS / ADDITIONAL RESEARCH TOPICS

As 3 Axis Advisors conducted this research, we encountered questions that we either 1) did not have the required data to explore and/or 2) were outside the scope of this study. We present these questions to propose research topics that New York could explore to deepen its study of drug pricing in Medicaid managed care:

### 13.1 SPREAD AND THE MEDICAL LOSS RATIO (MLR) CALCULATION

Medical Loss Ratio, or MLR, is measured to ensure that plans are spending a specified amount of premium dollars on medical expenses, as opposed to administrative expense. With the lack of transparency surrounding spread, we wondered if spread was being split out from "medical expenses" and counted as "administrative expenses?" If it is being included in medical expense, it would inflate the plan's medical expenses portion of their MLR. This would provide the plan with the warped incentive to choose a spread model over a transparent fee model to lower expenses classified as administrative and raise those classified as medical. The impact of spread pricing on the MLR requirement was also identified as an additional concern in Auditor Yost's report on Ohio's Medicaid Managed Care Pharmacy Services.<sup>36</sup>

### 13.2 DEEP-DIVE INTO MEDICAID REBATES – IMPACT ON OPTIMAL UTILIZATION

Medicaid and CHIP Payment and Access Commission (MACPAC) reported that in FY16, New York received rebates equal to 53% of total gross drug spending.<sup>37</sup> Clearly no analysis of drug pricing in Medicaid is complete without a study of rebates and any associated fees related to rebates.

One of the key drivers of why rebates are so high in Medicaid is the unique design of the Medicaid Drug Rebate program, in which manufacturers are required to pay rebates for brand-name, "innovator" drugs based on the following logic<sup>38</sup>:

*Innovator Drugs – the greater of 23.1% of the Average Manufacturer Price (AMP) per unit or the difference between the AMP and the best price per unit and adjusted by the Consumer Price Index-Urban (CPI-U) based on launch date and current quarter AMP.*

The combination of the 23.1% base rebate, the best price adjustment, and the CPI-U adjustment causes the rebate on brand name drugs to scale up substantially over time. While we do not have access to all the data needed to precisely calculate statutory rebates for individual drugs, channel checks suggest that brand-name drugs late in their patent life can pay the state rebates surpassing 70%, 80%, or even 90% of the amount paid to the plan. The math supports these anecdotes, as above-inflation price increases reduce the net price of the drug as the CPI-U adjustment negates the excess drug price inflation, but the manufacturer pays annual rebates off a higher base price.

This unique Medicaid rebate math theoretically changes the decision on when the state should switch from a brand to a generic, after the brand loses its patent. Outside of Medicaid, the rule of the thumb that a generic is "cheaper" than a brand is typically true. When outsized Medicaid rebates on brand-name drugs are considered, this rule of thumb may not hold anymore: in some instances, it may be cheaper for the state to dispense brand name drugs than generic drugs.

<sup>36</sup> [https://ohioauditor.gov/auditsearch/Reports/2018/Medicaid\\_Pharmacy\\_Services\\_2018\\_Franklin.pdf](https://ohioauditor.gov/auditsearch/Reports/2018/Medicaid_Pharmacy_Services_2018_Franklin.pdf)  
<sup>37</sup> <https://www.macpac.gov/macpac-stats/medicaid-benefits/>  
<sup>38</sup> <https://www.medicaid.gov/medicaid/prescription-drugs/medicaid-drug-rebate-program/index.html>

The question that should be assessed is whether New York's PBMs and MCOs are setting their Preferred Drug Lists (PDLs) to prefer the brand-name drug when its net cost is lower, or if these entities are switching beneficiaries to the generic as soon as it's available. The incentives for these entities would suggest that they would switch to the generic as soon as possible. Switching to a lower gross (but not net) cost generic drug reduces the MCO's expense, which would theoretically increase its profit given that it's paid on a capitated basis. And as we have established in this study, the PBM has an enormous incentive to maximize generic dispensing in managed care, especially when the PBM is in a spread contract with its MCO. These are concerning misaligned incentives that should be explored by the state to ensure that it is achieving the highest rebates, and lowest net drug costs. It should be noted that many states are converting to a uniform PDL, possibly to help correct this issue.

One example that is worth considering are the two HIV-1 treatment drugs that we discussed in 7.3.5.1: Overcharged Generics – Viread and Reyataz. Figure 26 shows the utilization history in New York of these two drugs as they transitioned from brand to generic – 92% of these two drugs were dispensed as generics. The most striking observation is the abrupt transition from brand to

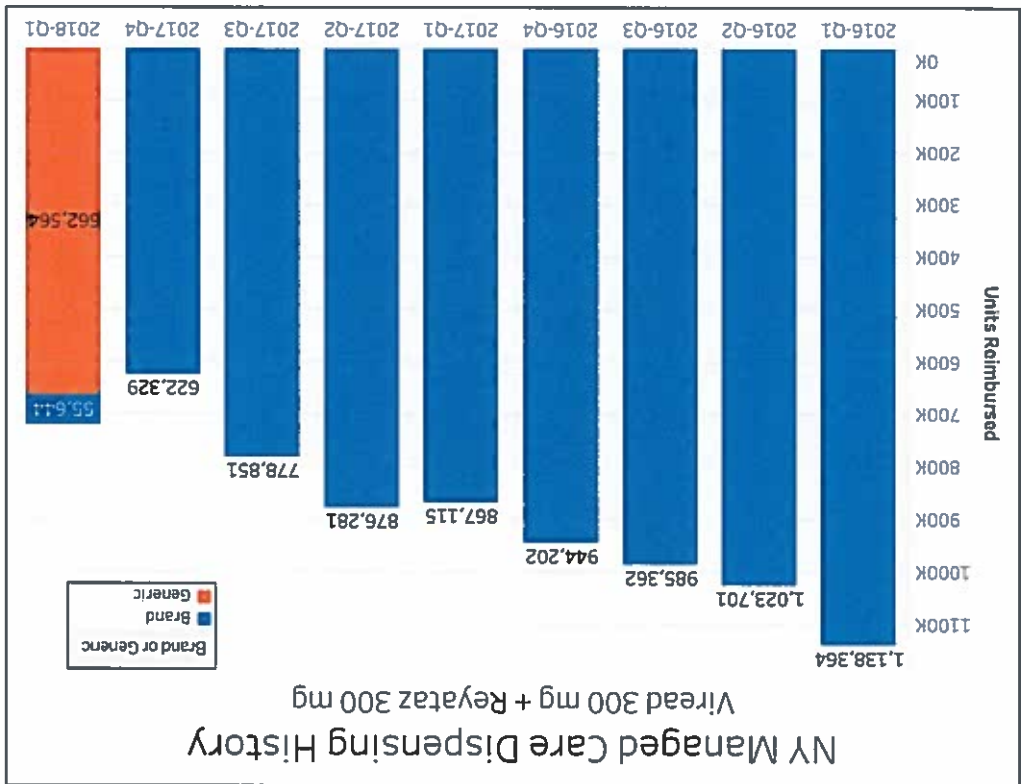


Figure 26: NY Managed Care Dispensing History - Viread and Reyataz

generic as soon as the generics became available. At \$21.84 per unit, the weighted average generic cost was certainly lower than the brand, which was \$35.49 per unit. As a non-innovator drug, the generic also qualifies for a 13% rebate to AMP, which would further reduce its net cost. But is this enough to make the generic cheaper than the post-rebate brand?

While we do not have access to the data we need to answer this question, we can look at programs in other states using a PDL set by the state instead of the PBM to see if the switch on these two drugs was as abrupt as New York experienced. Figure 27 shows the same chart for Medicaid Fee-for-Service in California. Instead of the abrupt switch we saw in New York, we see a gradual transition in California, with the state only dispensing 18% of these two drugs as generics.

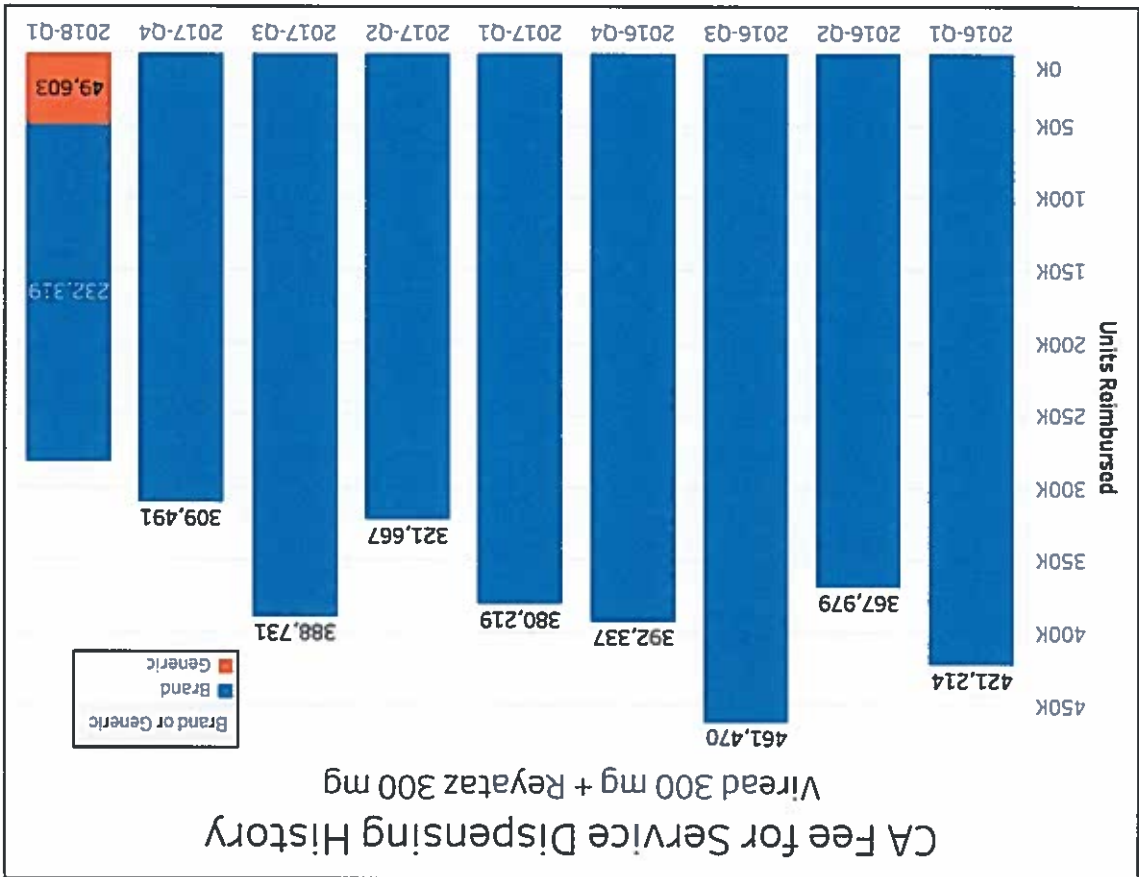


Figure 27: CA Fee-for-Service Dispensing History - Viread and Reyataz

While this is admittedly only one example, it is a substantial example. In 2017, New York spent \$116 million before rebates on these two brand-name drugs. How much in rebates did New York receive that year, and how much was lost in 2018 when the switch occurred? This example also helps illustrate the broader issue of misaligned incentives when it comes to PDL management that several states are addressing by moving to a uniform PDL that they control.<sup>39</sup>

<sup>39</sup> <https://www.kff.org/medicaid/state-indicator/states-reporting-managed-care-pharmacy-uniform-preferred-drug-list-pdl-requirements/?currentTimeframe=0&sortModel=%7B%22collid%22:%22location%22,%22sort%22:%22asc%22,%22asc%22%7>

## 14 ABOUT 3 AXIS ADVISORS

3 Axis Advisors is an elite, highly-specialized consultancy that partners with private and government sector organizations to solve complex, systemic problems and propel industry reform through data-driven advocacy. With a primary focus on identifying and analyzing U.S. drug supply chain inefficiencies and cost drivers, 3 Axis Advisors offers unparalleled expertise in project design, data aggregation and analysis, government affairs and media relations.

3 Axis Advisors arms clients with independent data analysis needed to spur change and innovation within their respective industries. Co-founders Eric Pachman and Antonio Ciacia were instrumental in exposing the drug pricing distortions and supply chain inefficiencies embedded in Ohio's Medicaid managed care program. They are also the co-founders of 46brooklyn Research, a non-profit organization dedicated to improving the transparency and accessibility of drug pricing data for the American public.

To learn more about 3 Axis Advisors, visit [www.3axisadvisors.com](http://www.3axisadvisors.com)



## 15 ABOUT PSSNY

The Pharmacists Society of the State of New York (PSSNY) has served the state's pharmacists for more than 138 years providing advocacy and resources to pharmacists to improve patient care. PSSNY represents licensed pharmacists throughout the State of New York working in all types of practice settings. Of particular relevance to PBM issues, New York State has 2,325 independent pharmacies representing half of the pharmacies in New York and 10% of the total independent pharmacies in the United States. According to the National Community Pharmacists Association, these local New York businesses generate more than \$7.7 billion in pharmacy sales and create more than 21,000 full-time jobs. New York's independent pharmacies fill nearly 139 million prescriptions each year, generate an additional \$7.5 billion in economic activity, and create 8,742 jobs outside the pharmacy in their local communities and are major contributors to their local communities and economies.

To learn more about PSSNY, visit [www.PSSNY.org](http://www.PSSNY.org)

PSSNY's Press Room: [www.PSSNY.org/PressRoom](http://www.PSSNY.org/PressRoom)



Pharmacists Society of the State of New York, Inc.

# 16 APPENDIX A: NY MANAGED CARE PLAN DEFINITIONS (2016)

NYS Medicaid Managed Care Plan Unique Information Chart

as of 10/11/16

Managed Care Plan	Pharmacy Benefit Manager (PBM) or Billing Agent	LTC	Pharmacy (PBM) (Bill Drugs to (PCN) NMCC Plan or (SNP))	Processor	Control Number (Bill = Unique to Medicaid)	Bill Number (Bill = Unique to Medicaid)	Group Number (Bill = Unique to Medicaid)	SLIMINARY-UNIQUE to Medicaid Info on MCO Card (Bill)	Other Medicaid Info on MCO Card
Altruity Health Plan	CVS Caremark	Plan	ADV	004336	RX4212	Group Number	Required on claim	Yellow card w/ "Program: ME" in upper right corner.	Contains CINS
Amica Care	Express Scripts	Plan	A4	003838	KJFA	Group Number	Required on claim	Contains CINS	Contains CINS
HCB5WNY (HealthNow Inc.)	Express Scripts	Plan	N/A	610014	HNRXS	Group Number	Required on claim	None	Contains CINS; Includes Rx copies.
CDPFP	CVS Caremark	SNP - Rehab or recovery;	ADV	004336	RXCDHP	Group Number	Required on claim	None	Includes Rx copies.
Cystal Run	MedImpact	Varies by SNP Contract	ASPRODI	003858	CRH01	Group Number	Not Required on claim	None	Card specifies
Emblem Health-HP New York	Express Scripts	Plan	Required on claim	015748	KJZA	PCN Number	Not Required on claim	Upper right corner has "Enhanced Care" for maintenance Medicaid and "Enhanced Care Plus" for HARP	Contains CINS
Excelsior Health Plan, Inc	MedImpact Healthcare System, Inc (Fall 12/1/2016)	Plan	74000	003858	0066441	Group Numbers	Not Required on claim	None	Contains CINS
Excelsior Health Plan, Inc (Starting 01/01/2017)	Express Scripts	Plan	MA	003858	E3LSNRX	PCN Number	Required on claim	None	Contains CINS
Fidelis Care	CVS Caremark	SNF	ADV	004336	RX Group: RX6460	Group Number	Required on claim	None	Contains CINS

NYS Medicaid Managed Care Plan Unique Information Chart

as of 10/11/16

Managed Care Plan	Pharmacy Benefit Manager (PBM) or Billing Agent	LTC	Pharmacy (PBM) (Bill Drugs to (PCN) NMCC Plan or (SNP))	Processor	Control Number (Bill = Unique to Medicaid)	Bill Number (Bill = Unique to Medicaid)	Group Number (Bill = Unique to Medicaid)	UNIQUE to Medicaid Info on MCO Card (Bill)	Other Unique Information on MCO Card
HealthFirst	CVS Caremark	SNF	ADV	004336	Rx113	Group Number	Required on claim	None	Includes Rx copies. Contains CINS
Empire BlueCross HealthPlus	Express Scripts	SNF	MA	003858	Group: WCKA	Group Number	Required on claim	None	Includes Rx copies. Contains CINS
Independent Health	Independent Health	Plan	Not Required	016577	Medical	Group Number	Not Required on Claim	None	The ID card identifies Includes Rx copies.
MicroVirus Health Plan	CVS Caremark	Plan	ADV	004336	RXMPFP	Group Number	Not Required on Claim	None	Includes Rx copies. Includes MCO Card
NVP, including former Hudson Health	CVS Caremark	Varies by SNP contract	ADV	004336	MVP625	Group Number	Required on claim	None	Plan Type: MVPM
VNSNY Choice	MedImpact	Plan	ASPRODI (letter O)	003858	VNS03	Group Number	Required on claim	None	Contains CINS
Total Care/Today's Options of New York	Express Scripts	Plan	A4	003858	TOTCARE	Group Number	Required on claim	None	ID# = CINS
UnitedHealthcare	Optum Rx	SNF	9999	610494	ACUNY	Group Number	Required on claim	None	Contains CINS, BIN #, PCN#, Rx Group
WellCare Health Plans, Inc. starting 1/1/16	CVS Caremark	SNF	MCAIDADV	004336	RX8893	Group Number	Required on claim	None	BIN/PCN/RX Group combination is unique to NY Medicaid - this is on the back of the member's card
YourCare Health Plan, Inc. formerly Ulvers	Express Scripts	SNF	MA	003838	RPMCRX	Group Number	Required on claim	None	Contains CINS



# 18 APPENDIX C: NY MANAGED CARE PLAN DEFINITIONS (2018)

NYS Medicaid Managed Care Unique Information Chart

Managed Care Plan	Pharmacy Benefit Manager (PBM) or Billing Agent	LTC	Pharmacy (PBM) or MDC Plan or (MDC Plan or SNP)	Processor Control Number (PCN) (Bold = Unique to Member)	BITN Number (Bold = Unique to Member)	Group Number (Bold = Unique to Member)	SUMMARY/UNIQUE MCO Card (Bold)	Other Unique Information on MCO Card
AtUnity Health Plan			CVS Caremark	ADV	00136	RX4212		Yellow card w/ "Program" MLE in upper right corner.
Amica Care			Express Scripts	MA	00358	KJFA		Contains CIN#
BCBSNY (HealthNow Inc.)			Express Scripts	MA	00358	WKJA		Contains CIN#; Includes Rx
GDRP			CVS Caremark	ADV	00136	RXCDPHF		Includes Rx copies.
Cystal Run			MedImpact	Verifies by SNP Contract	00358	CRH01		Unique Identifier "01MF" bottom right corner of the card
Emblem Health-HP Health Plan of New York			Express Scripts	Plan	022011001	KJZA		Upper right corner has "Enhanced Care" for malpractice Medical and "EMRP" for HARP.
Excelsior Health Plan, Inc.			Express Scripts	MA	00358	EXLSWRX		Contains CIN#
Fidelis Care			CVS Caremark	ADV	00136	RXG668		Contains CIN#
Healthplan			CVS Caremark	ADV	00136	BE1113		Contains CIN#
Empur Shield Blue Cross Blue Shield HealthPlan			Express Scripts	MA	00358	Greep: WKKA		Includes Rx copies.

as of 1/1/18

NYS Medicaid Managed Care Unique Information Chart

Managed Care Plan	Pharmacy Benefit Manager (PBM) or Billing Agent	LTC	Pharmacy (PBM) or MDC Plan or (MDC Plan or SNP)	Processor Control Number (PCN) (Bold = Unique to Member)	BITN Number (Bold = Unique to Member)	Group Number (Bold = Unique to Member)	UNIQUE to Medicaid MCO Card (Bold)	Other Unique Information on MCO Card
Independent Health			Pharmacy Benefit Manager (PBM) or (MDC Plan or SNP)	Not Required	016557	Medical (Not Required on Claim)		Includes Rx
Metrolife Health			CVS Caremark	ADV	00436	RXMTNF		IDM = CIN#
MVP			CVS Caremark	Verifies by ADV	00436	MVW25		Plan Type: MVPM
VNSNY			MedImpact	Plan	00358	VNS03		Contains CIN#
Molina			CVS Caremark (as of 1/1/2018)	ADV	00436	RX546		IDM = CIN#
Healthcare (formerly Total Options of NY)			Optima Rx	SNP	61094	ACVNY		Contains CIN#, BIN #, PCN#, Rx Grp
United Healthcare			Optima Rx	SNP	61094	ACVNY		Contains CIN#, BIN #, PCN#, Rx Grp
WellCare Health Plans, Inc.			CVS Caremark	SNP	00436	RX092		BIN/PCN/RX Group
YourCare Health Plan			Express Scripts	Plan	MA	MFMCRX		Contains CIN#

NOTE: Effective 8/1/18, YourCare changed to BIN = 610011, PCN = IRX, Group = YOURCARE





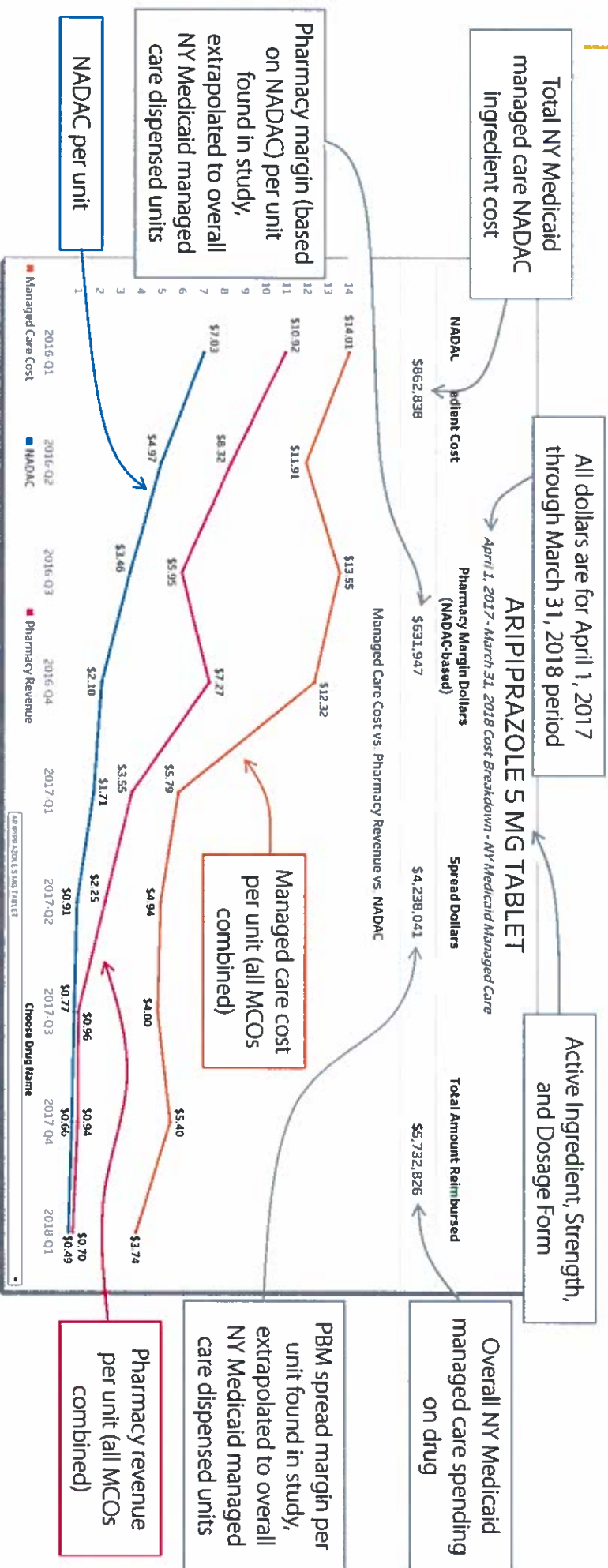
# 3 ΔXIS Advisors

ANALYSIS OF PBM SPREAD PRICING  
IN NEW YORK MANAGED CARE  
DRUG PRICE CHART SUPPLEMENT

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Prepared for the Pharmacists Society of  
the State of New York

# HOW TO READ DRUG PRICE CHARTS\*

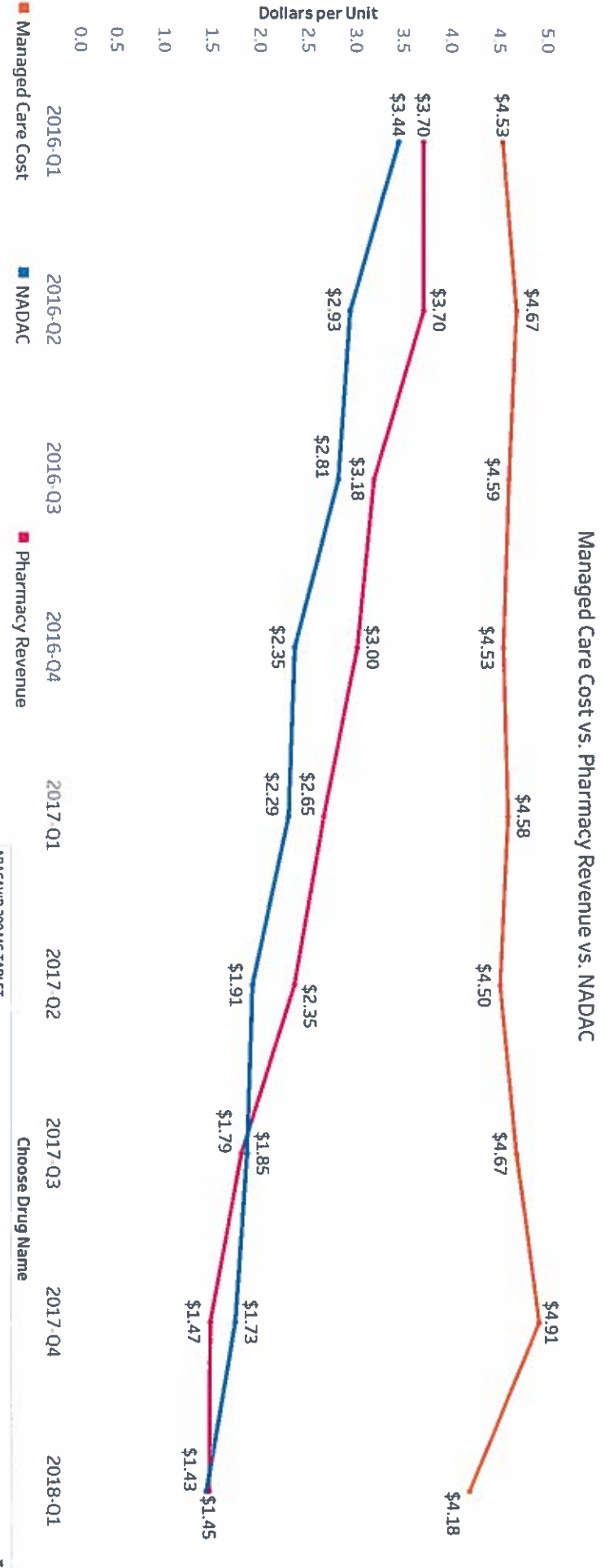


\* Please refer to full documentation for study methodology, assumptions and limitations - "Analysis of PBM Spread Pricing in New York Managed Care" (January 17, 2019)

# ABACAVIR 300 MG TABLET

April 1, 2017 - March 31, 2018 Cost Breakdown - NY Medicaid Managed Care

NADAC Ingredient Cost	Pharmacy Margin Dollars (NADAC-based)	Spread Dollars	Total Amount Reimbursed
\$132,856	(\$49)	\$216,438	\$349,245



# ARIPIPRAZOLE 2 MG TABLET

April 1, 2017 - March 31, 2018 Cost Breakdown - NY Medicaid Managed Care

NADAC Ingredient Cost

Pharmacy Margin Dollars  
(NADAC-based)

Spread Dollars

Total Amount Reimbursed

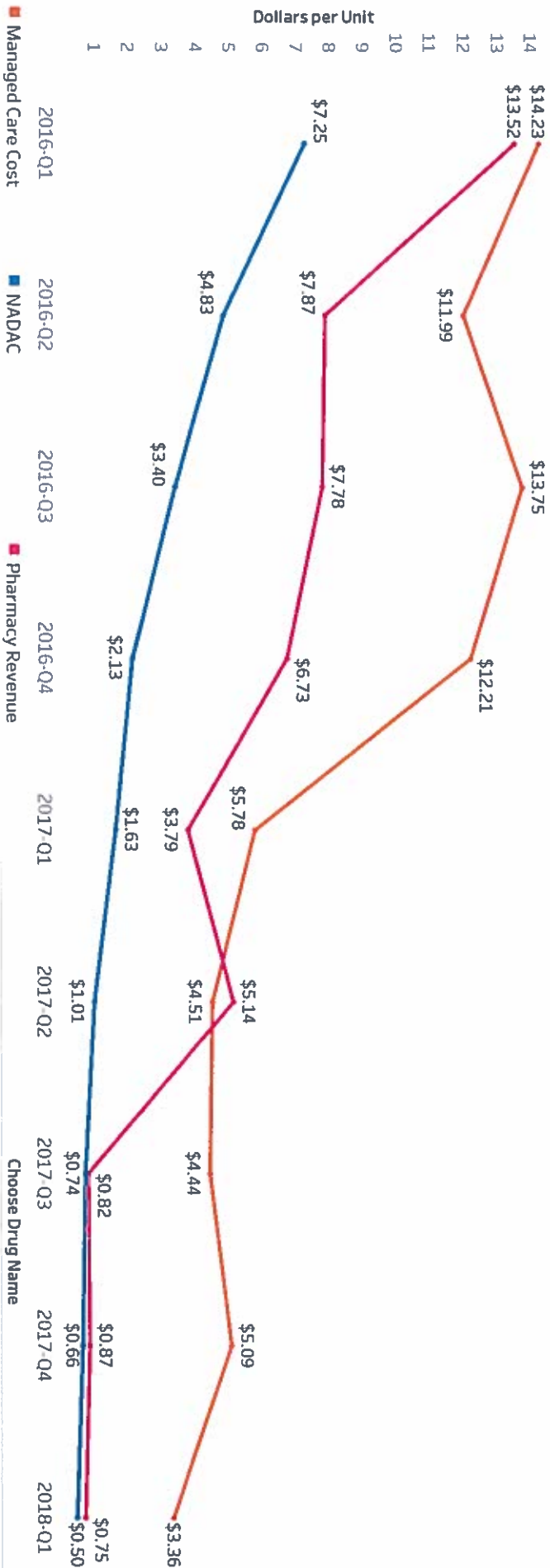
\$335,307

\$771,100

\$763,022

\$1,869,429

Managed Care Cost vs. Pharmacy Revenue vs. NADAC



ARIPIPRAZOLE 2MG TABLET

Choose Drug Name

# ARIPIPRAZOLE 5 MG TABLET

April 1, 2017 - March 31, 2018 Cost Breakdown - NY Medicaid Managed Care

NADAC Ingredient Cost

Pharmacy Margin Dollars  
(NADAC-based)

Spread Dollars

Total Amount Reimbursed

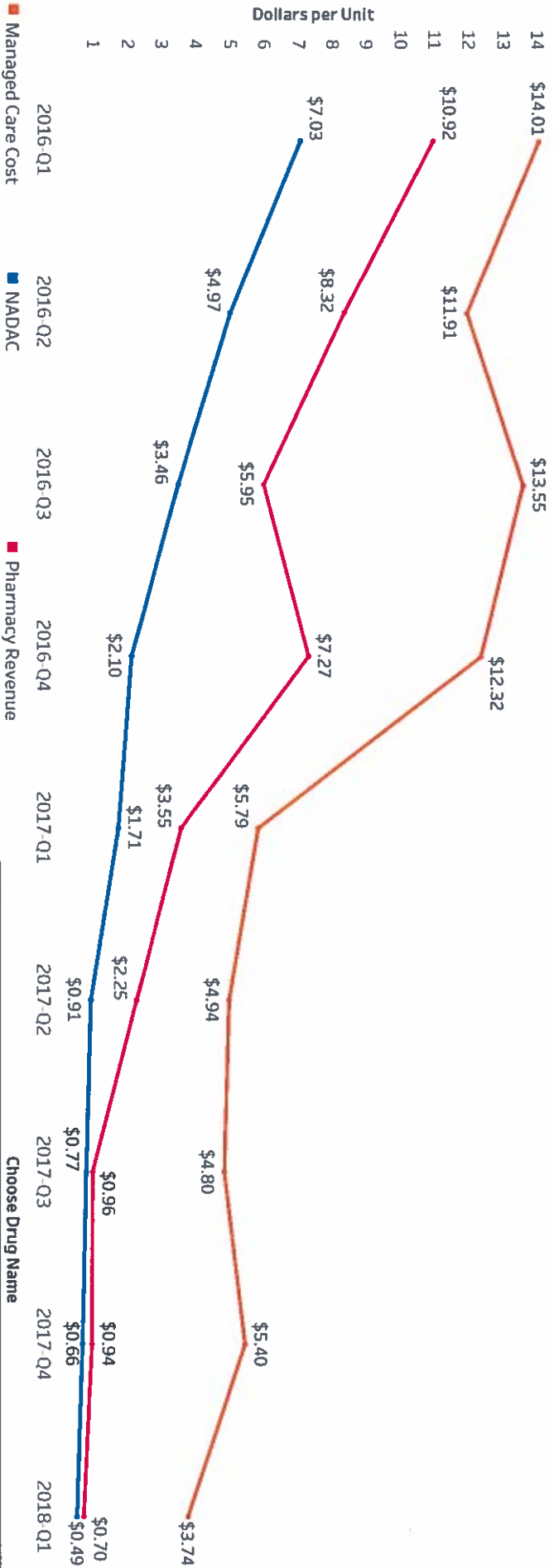
\$862,838

\$631,947

\$4,238,041

\$5,732,826

Managed Care Cost vs. Pharmacy Revenue vs. NADAC



ARIPIPRAZOLE 5 MG TABLET

Choose Drug Name

3AXIS Advisors

# ARIPIPRAZOLE 10 MG TABLET

April 1, 2017 - March 31, 2018 Cost Breakdown - NY Medicaid Managed Care

NADAC Ingredient Cost

Pharmacy Margin Dollars  
(NADAC-based)

Spread Dollars

Total Amount Reimbursed

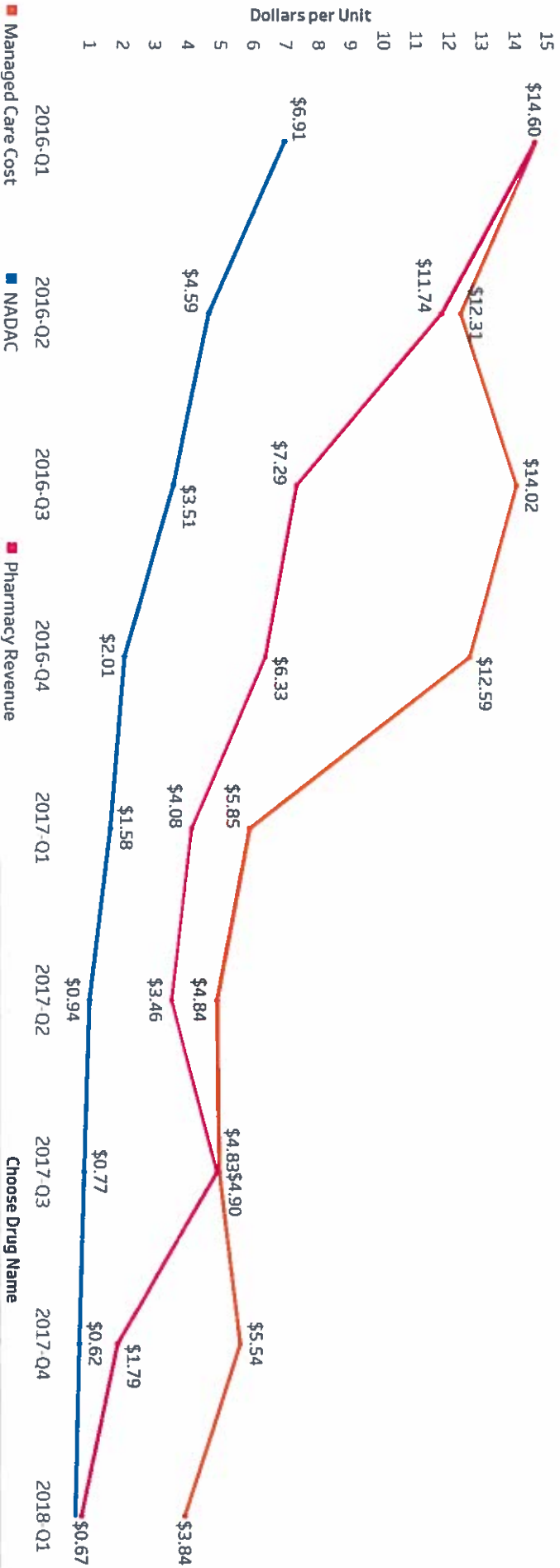
\$683,470

\$1,785,435

\$1,997,118

\$4,466,024

Managed Care Cost vs. Pharmacy Revenue vs. NADAC



ARIPIPRAZOLE 10 MG TABLET

Choose Drug Name

3AXIS Advisors

# BUSPIRONE HCL 30 MG TABLET

April 1, 2017 - March 31, 2018 Cost Breakdown - NY Medicaid Managed Care

NADAC Ingredient Cost

Pharmacy Margin Dollars  
(NADAC-based)

Spread Dollars

Total Amount Reimbursed

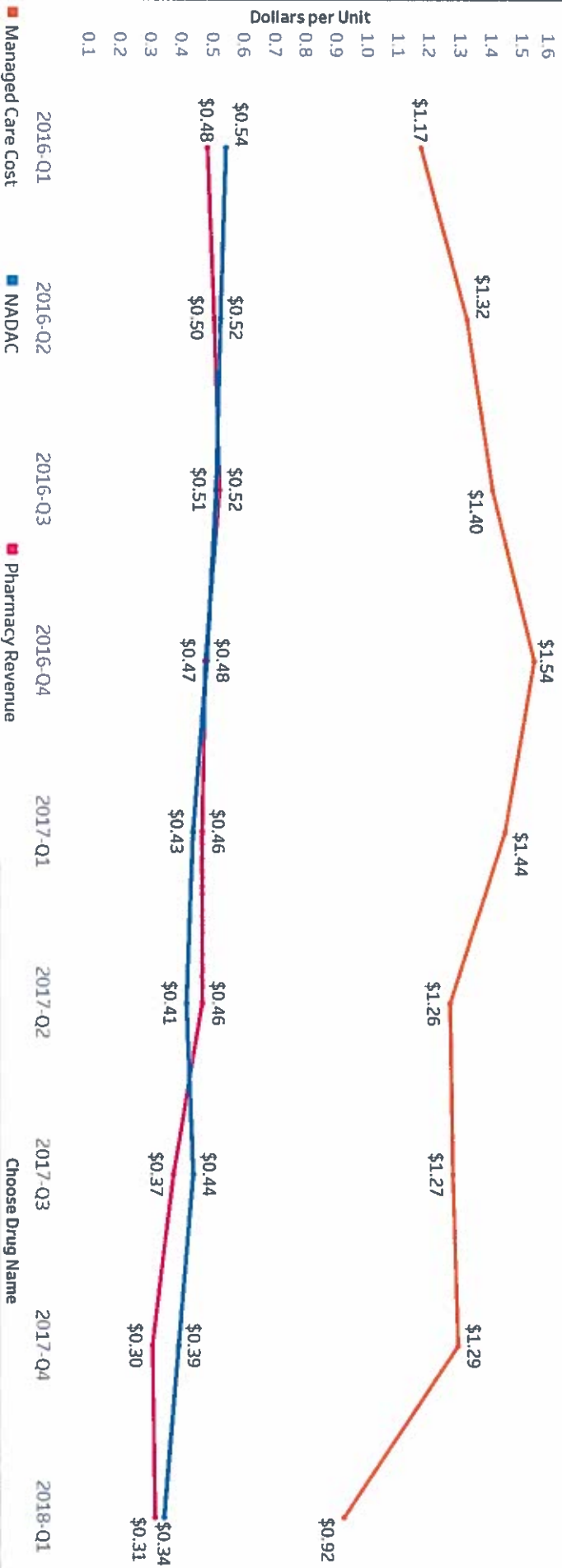
\$311,761

(\$25,299)

\$651,206

\$937,668

Managed Care Cost vs. Pharmacy Revenue vs. NADAC



BUSPIRONE HCL 30MG TABLET

Choose Drug Name

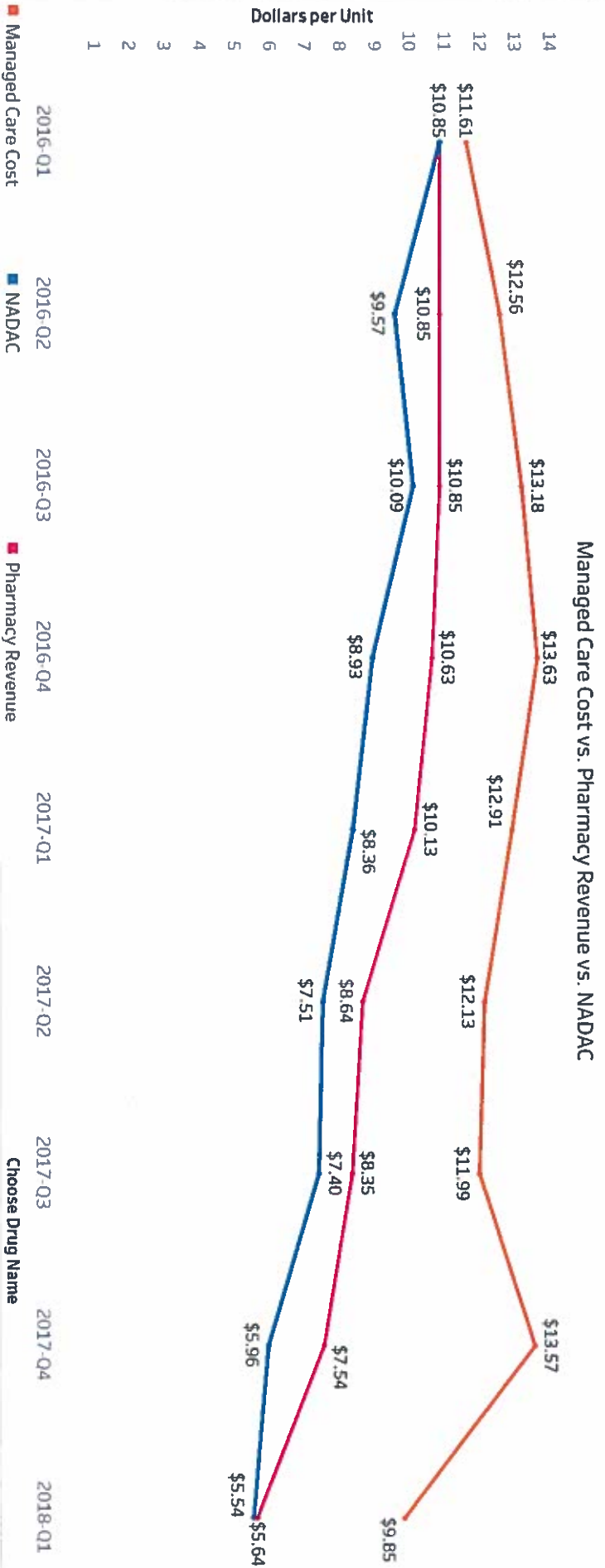
3AXIS Advisors

# CABERGOLINE 0.5 MG TABLET

April 1, 2017 - March 31, 2018 Cost Breakdown - NY Medicaid Managed Care

NADAC Ingredient Cost      Pharmacy Margin Dollars (NADAC-based)      Spread Dollars      Total Amount Reimbursed

\$214,079      \$29,985      \$140,449      \$384,513



CABERGOLINE 0.5 MG TABLET

Choose Drug Name



# CELECOXIB 200 MG CAPSULE

April 1, 2017 - March 31, 2018 Cost Breakdown - NY Medicaid Managed Care

NADAC Ingredient Cost

Pharmacy Margin Dollars  
(NADAC-based)

Spread Dollars

Total Amount Reimbursed

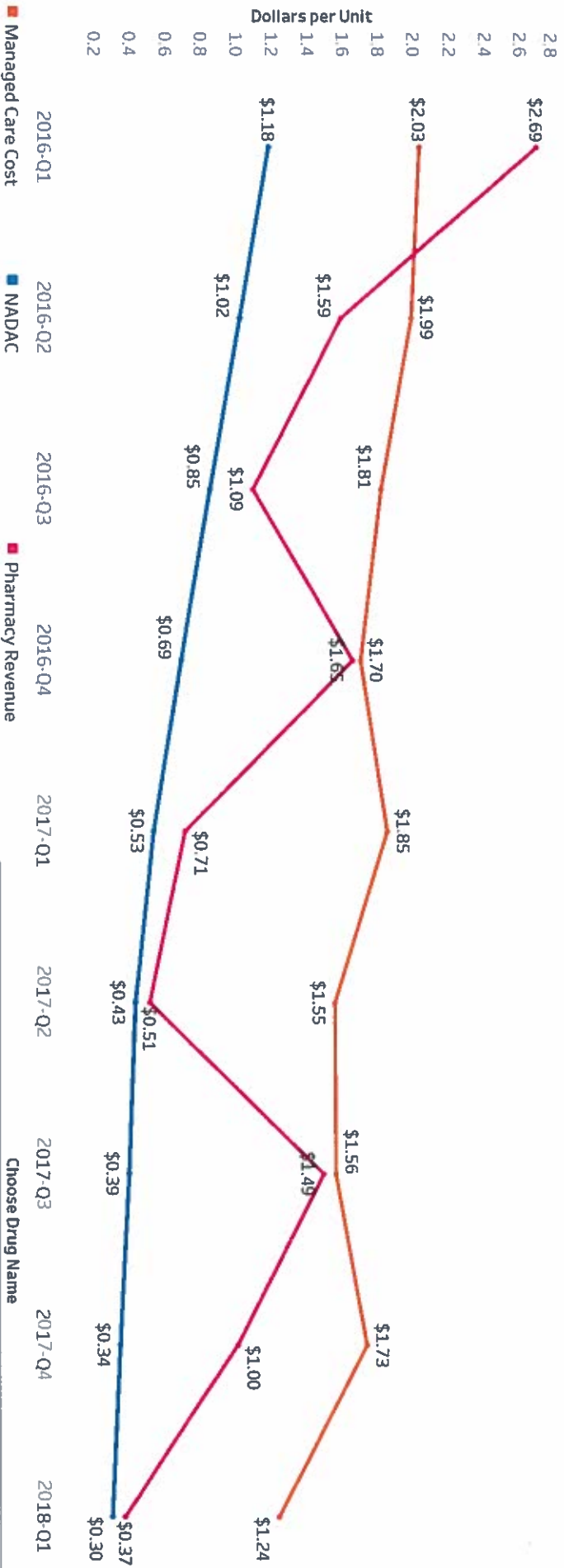
\$85,031

\$146,836

\$131,994

\$363,861

Managed Care Cost vs. Pharmacy Revenue vs. NADAC



CELECOXIB 200 MG CAPSULE

Choose Drug Name

3AXIS Advisors

# CHLORPROMAZINE 50 MG TABLET

April 1, 2017 - March 31, 2018 Cost Breakdown - NY Medicaid Managed Care

NADAC Ingredient Cost

Pharmacy Margin Dollars  
(NADAC-based)

Spread Dollars

Total Amount Reimbursed

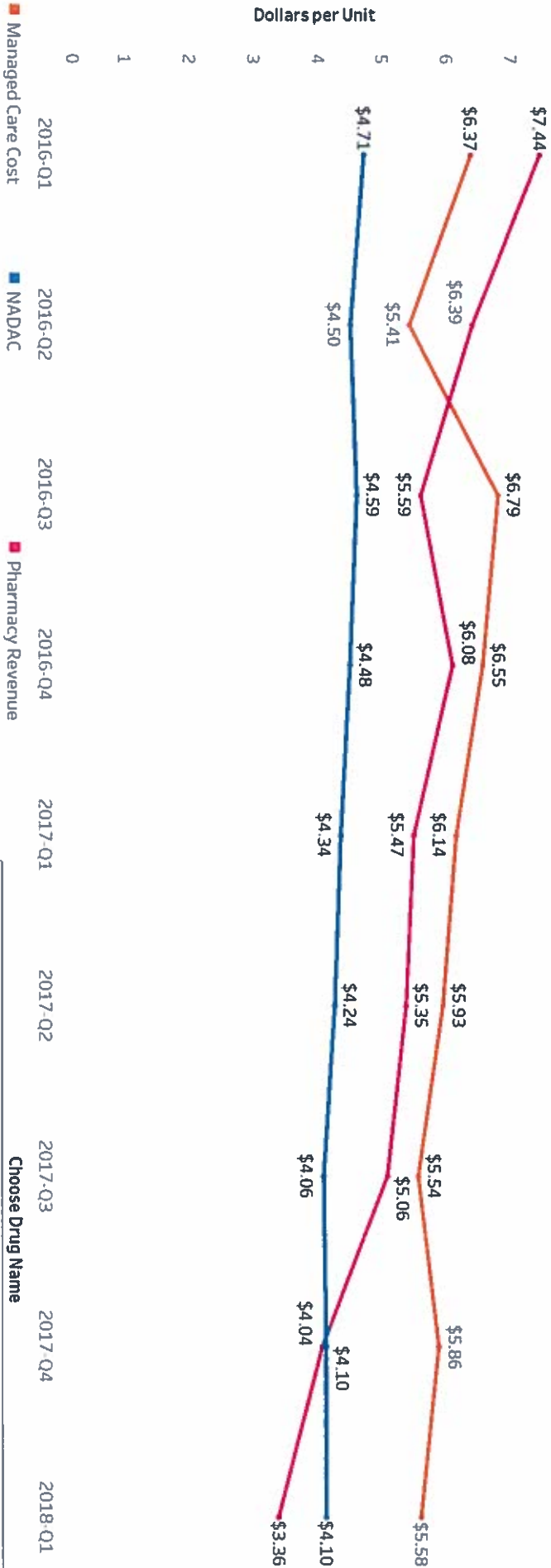
\$665,759

\$68,138

\$188,883

\$922,781

Managed Care Cost vs. Pharmacy Revenue vs. NADAC



CHLORPROMAZINE 50 MG TABLET

Choose Drug Name

3AXIS Advisors

# DEXTROAMP-AMPHET ER 20 MG CAP

April 1, 2017 - March 31, 2018 Cost Breakdown - NY Medicaid Managed Care

NADAC Ingredient Cost

Pharmacy Margin Dollars  
(NADAC-based)

Spread Dollars

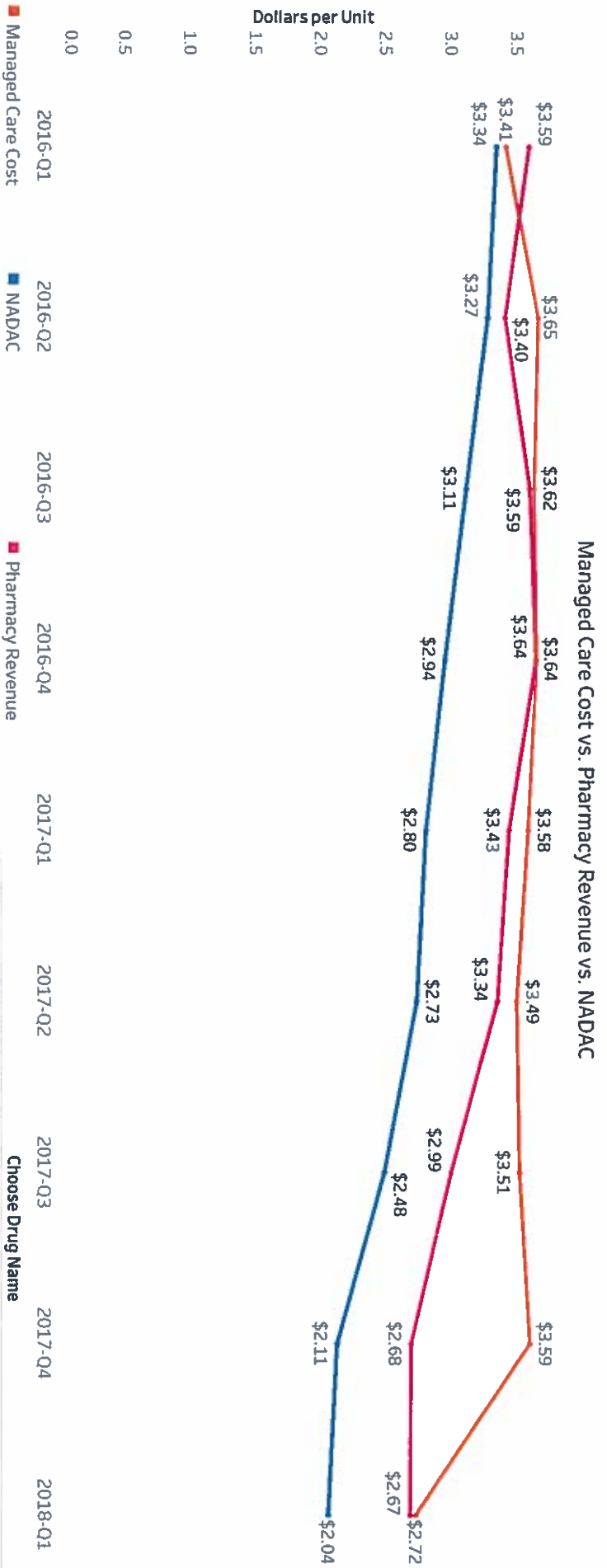
Total Amount Reimbursed

\$4,262,276

\$1,066,347

\$711,950

\$6,040,573



DEXTROAMP-AMPHET ER 20 MG CAP

Choose Drug Name

3AXIS Advisors

# DICLOFENAC POT 50 MG TABLET

April 1, 2017 - March 31, 2018 Cost Breakdown - NY Medicaid Managed Care

NADAC Ingredient Cost

Pharmacy Margin Dollars  
(NADAC-based)

Spread Dollars

Total Amount Reimbursed

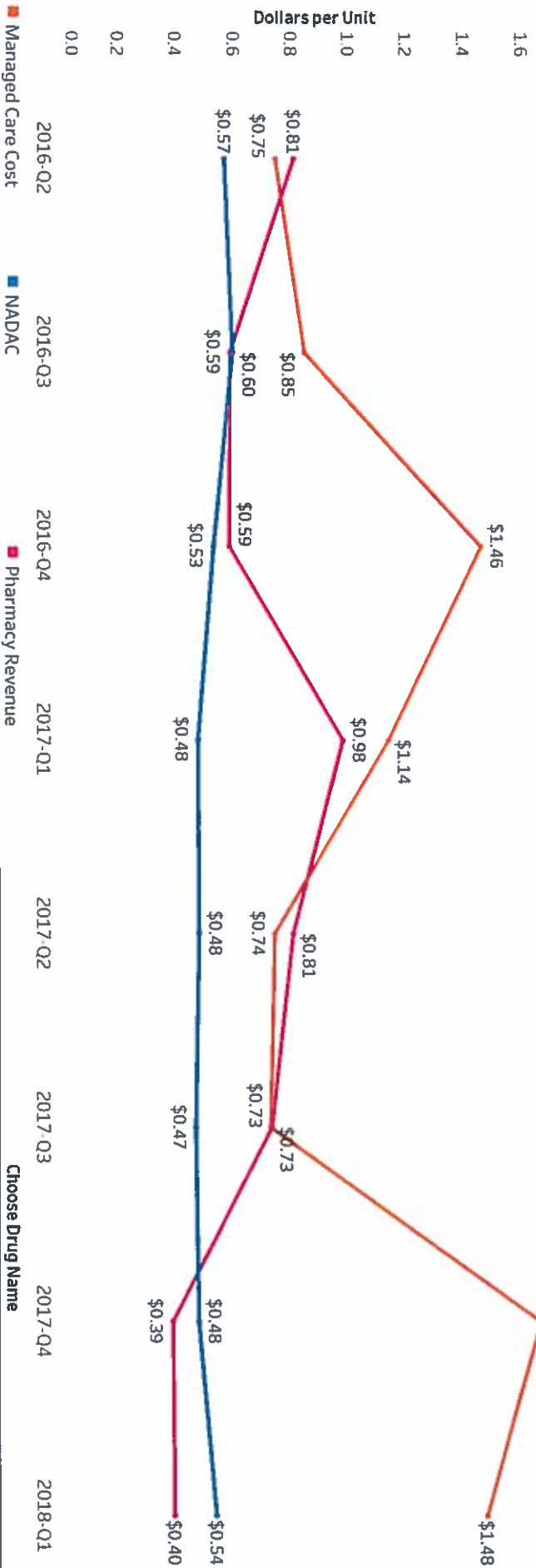
\$515,609

(\$14,615)

\$915,065

\$1,416,059

Managed Care Cost vs. Pharmacy Revenue vs. NADAC



DICLOFENAC POT 50 MG TABLET

Choose Drug Name

3AXIS Advisors

# DICLOFENAC SOD ER 100 MG TAB

April 1, 2017 - March 31, 2018 Cost Breakdown - NY Medicaid Managed Care

NADAC Ingredient Cost

Pharmacy Margin Dollars  
(NADAC-based)

Spread Dollars

Total Amount Reimbursed

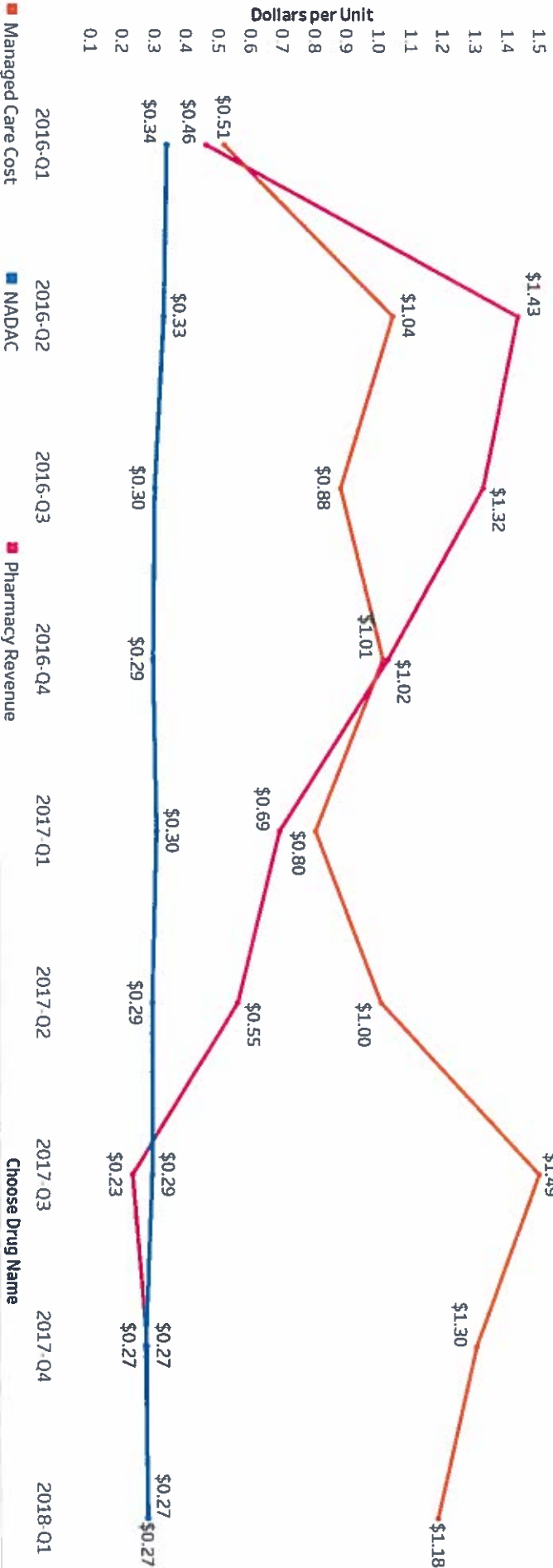
\$226,477

\$32,157

\$766,321

\$1,024,954

Managed Care Cost vs. Pharmacy Revenue vs. NADAC



DICLOFENAC SOD ER 100 MG TAB

Choose Drug Name

3AXIS Advisors

# DIVALPROEX SOD DR 500 MG TAB

April 1, 2017 - March 31, 2018 Cost Breakdown - NY Medicaid Managed Care

NADAC Ingredient Cost

Pharmacy Margin Dollars  
(NADAC-based)

Spread Dollars

Total Amount Reimbursed

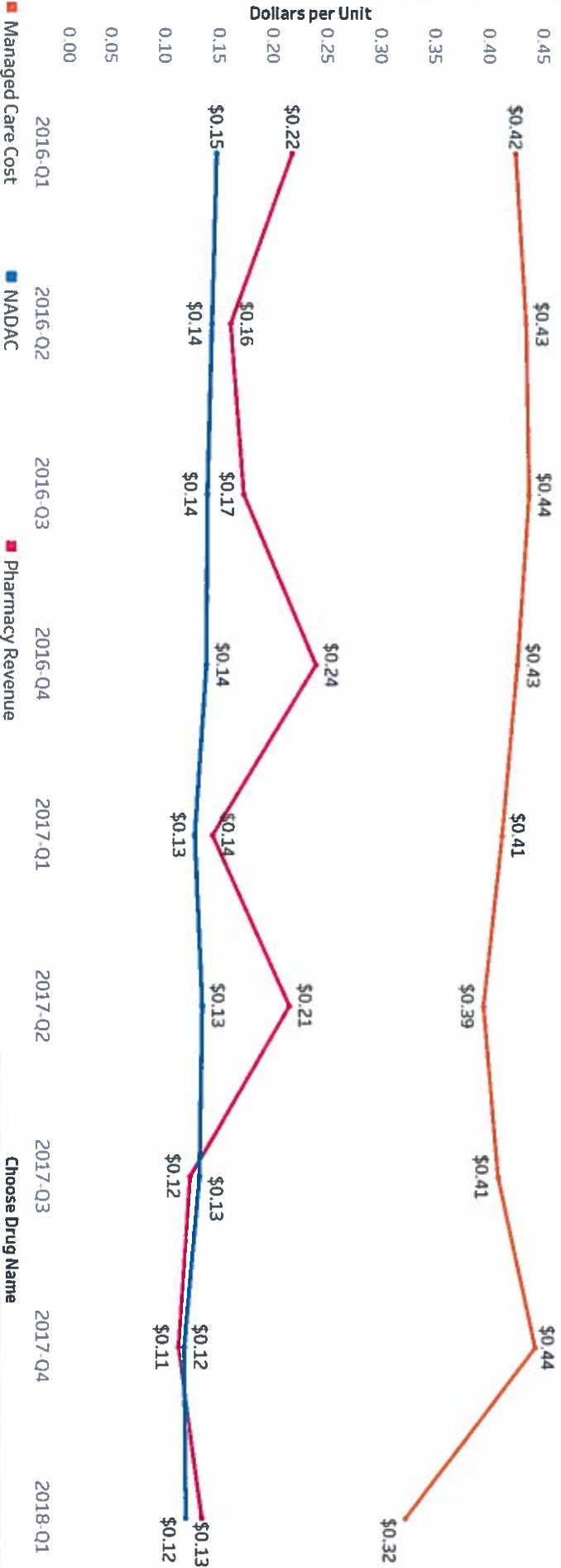
\$282,289

\$46,403

\$549,572

\$878,264

Managed Care Cost vs. Pharmacy Revenue vs. NADAC



DIVALPROEX SOD DR 500 MG TAB

Choose Drug Name

3AXIS Advisors

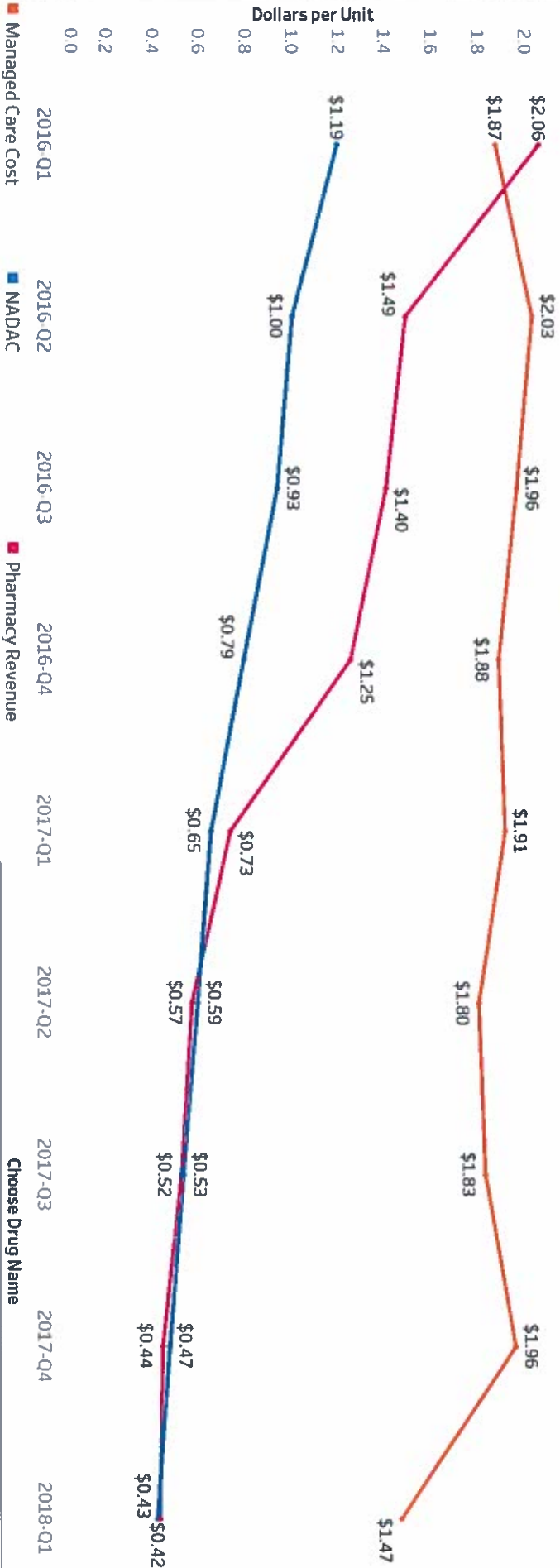
# DIVALPROEX SOD ER 500 MG TAB

April 1, 2017 - March 31, 2018 Cost Breakdown - NY Medicaid Managed Care

NADAC Ingredient Cost      Pharmacy Margin Dollars (NADAC-based)      Spread Dollars      Total Amount Reimbursed

\$699,322      (\$23,749)      \$1,722,865      \$2,398,438

Managed Care Cost vs. Pharmacy Revenue vs. NADAC



DIVALPROEX SOD ER 500 MG TAB

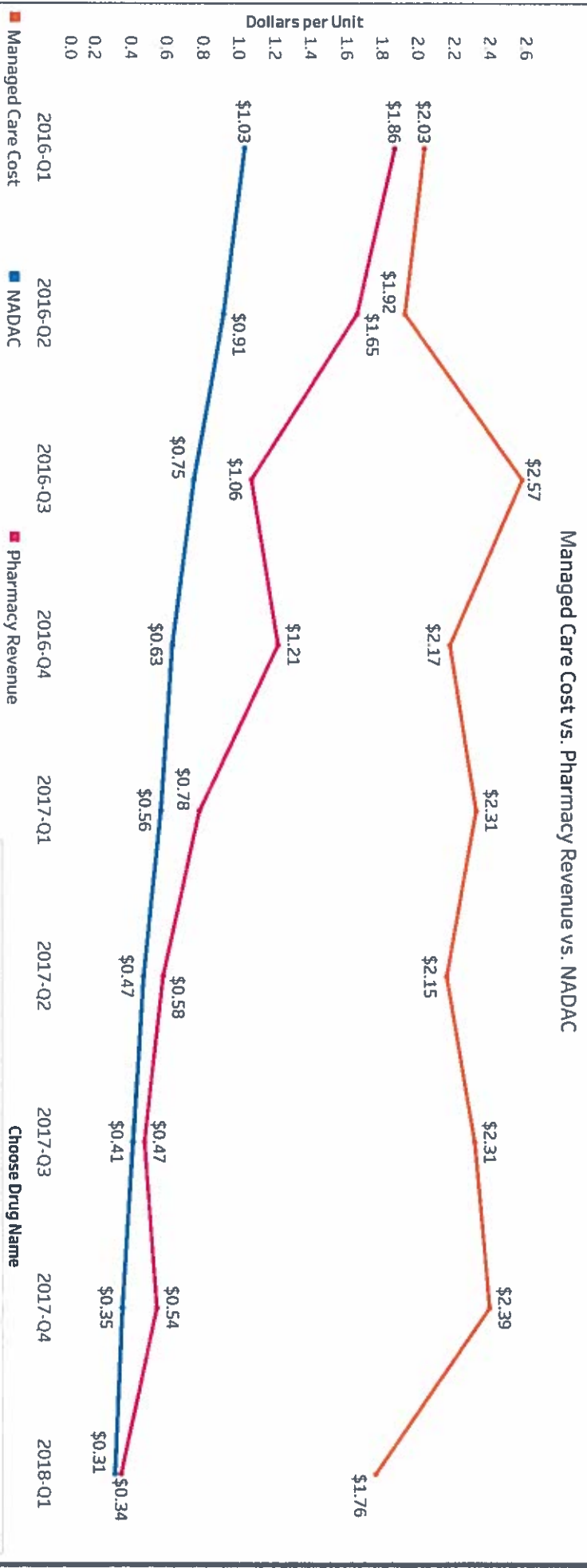
Choose Drug Name

3AXIS Advisors

# DOXYCYCLINE HYCLATE 100 MG CAP

April 1, 2017 - March 31, 2018 Cost Breakdown - NY Medicaid Managed Care

NADAC Ingredient Cost	Pharmacy Margin Dollars (NADAC-based)	Spread Dollars	Total Amount Reimbursed
\$346,349	\$92,595	\$1,516,731	\$1,955,676



DOXYCYCLINE HYCLATE 100 MG CAP

Choose Drug Name



# DOXYCYCLINE HYCLATE 100 MG TAB

April 1, 2017 - March 31, 2018 Cost Breakdown - NY Medicaid Managed Care

NADAC Ingredient Cost

Pharmacy Margin Dollars  
(NADAC-based)

Spread Dollars

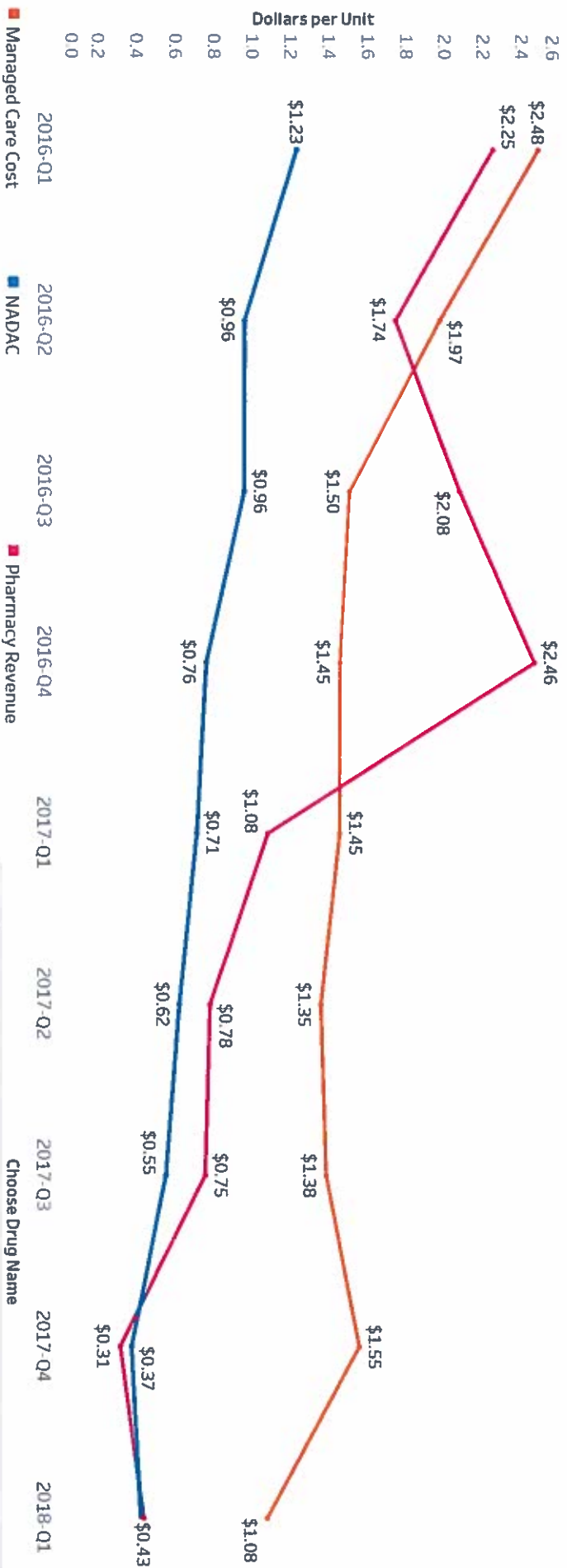
Total Amount Reimbursed

\$257,761

\$38,491

\$421,625

\$717,878



DOXYCYCLINE HYCLATE 100 MG TAB

Choose Drug Name

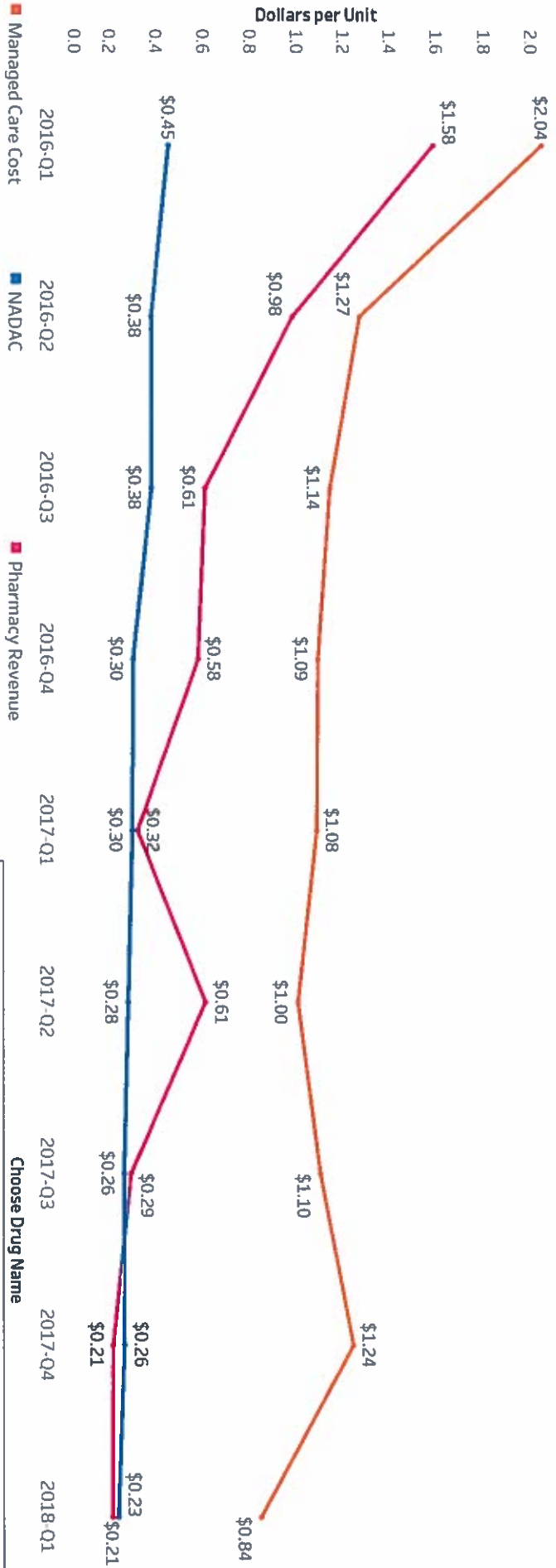
3AXIS Advisors

# DULOXETINE HCL DR 30 MG CAP

April 1, 2017 - March 31, 2018 Cost Breakdown - NY Medicaid Managed Care

NADAC Ingredient Cost	Pharmacy Margin Dollars (NADAC-based)	Spread Dollars	Total Amount Reimbursed
\$388,112	\$123,632	\$1,034,363	\$1,546,107

Managed Care Cost vs. Pharmacy Revenue vs. NADAC



DULOXETINE HCL DR 30 MG CAP

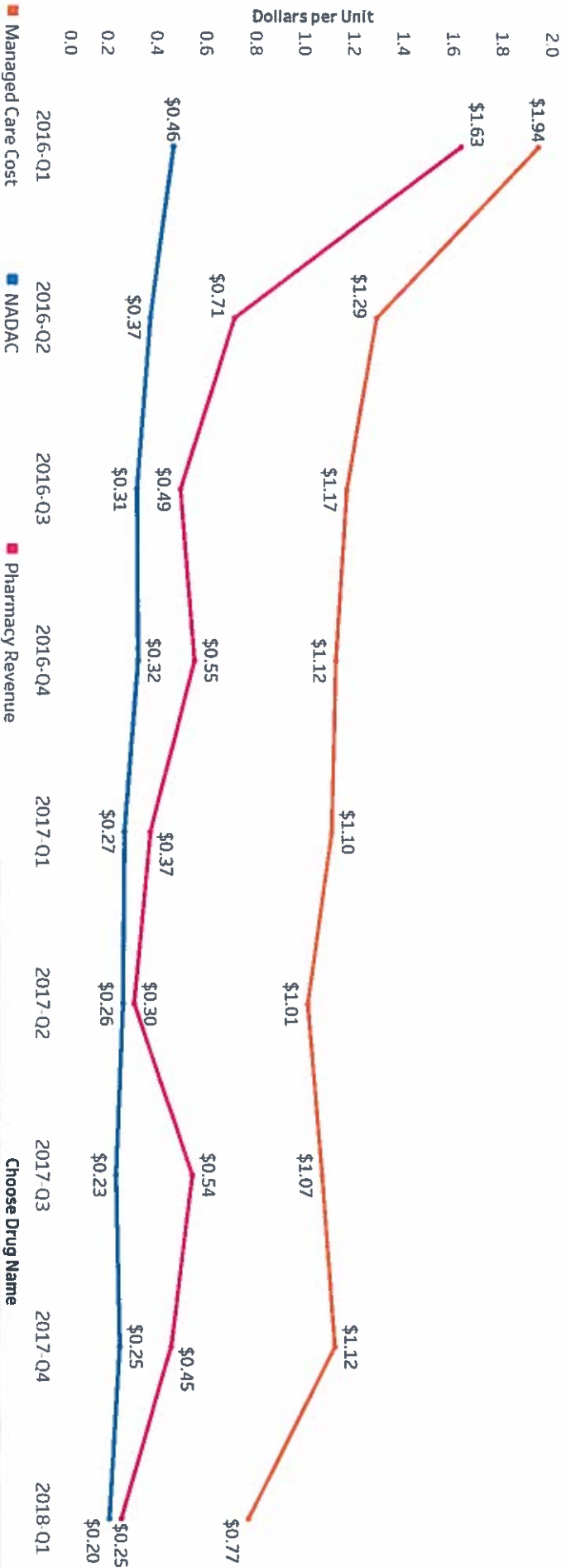
Choose Drug Name

# DULOXETINE HCL DR 60 MG CAP

April 1, 2017 - March 31, 2018 Cost Breakdown - NY Medicaid Managed Care

NADAC Ingredient Cost	Pharmacy Margin Dollars (NADAC-based)	Spread Dollars	Total Amount Reimbursed
\$558,089	\$399,814	\$1,409,589	\$2,367,492

Managed Care Cost vs. Pharmacy Revenue vs. NADAC



DULOXETINE HCL DR 60 MG CAP

Choose Drug Name

# ENTECAVIR 0.5 MG TABLET

April 1, 2017 - March 31, 2018 Cost Breakdown - NY Medicaid Managed Care

NADAC Ingredient Cost

Pharmacy Margin Dollars  
(NADAC-based)

Spread Dollars

Total Amount Reimbursed

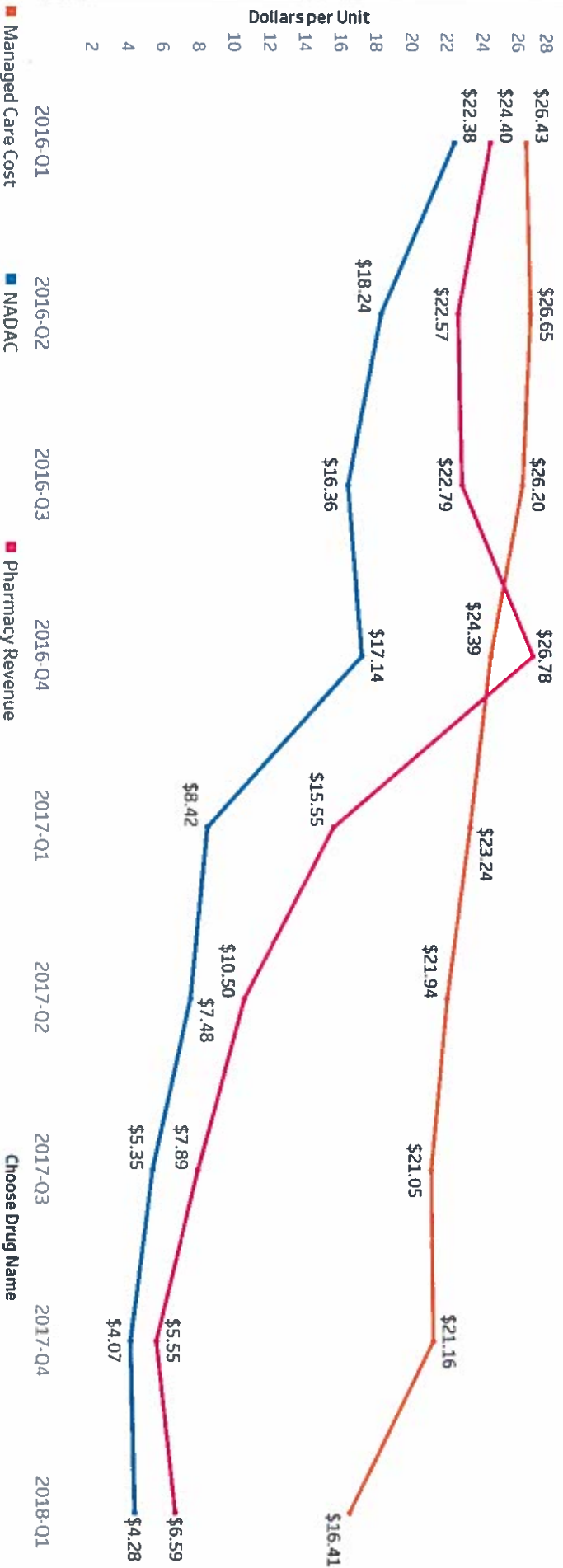
\$1,660,789

\$720,235

\$4,060,337

\$6,441,361

Managed Care Cost vs. Pharmacy Revenue vs. NADAC



ENTECAVIR 0.5 MG TABLET

Choose Drug Name

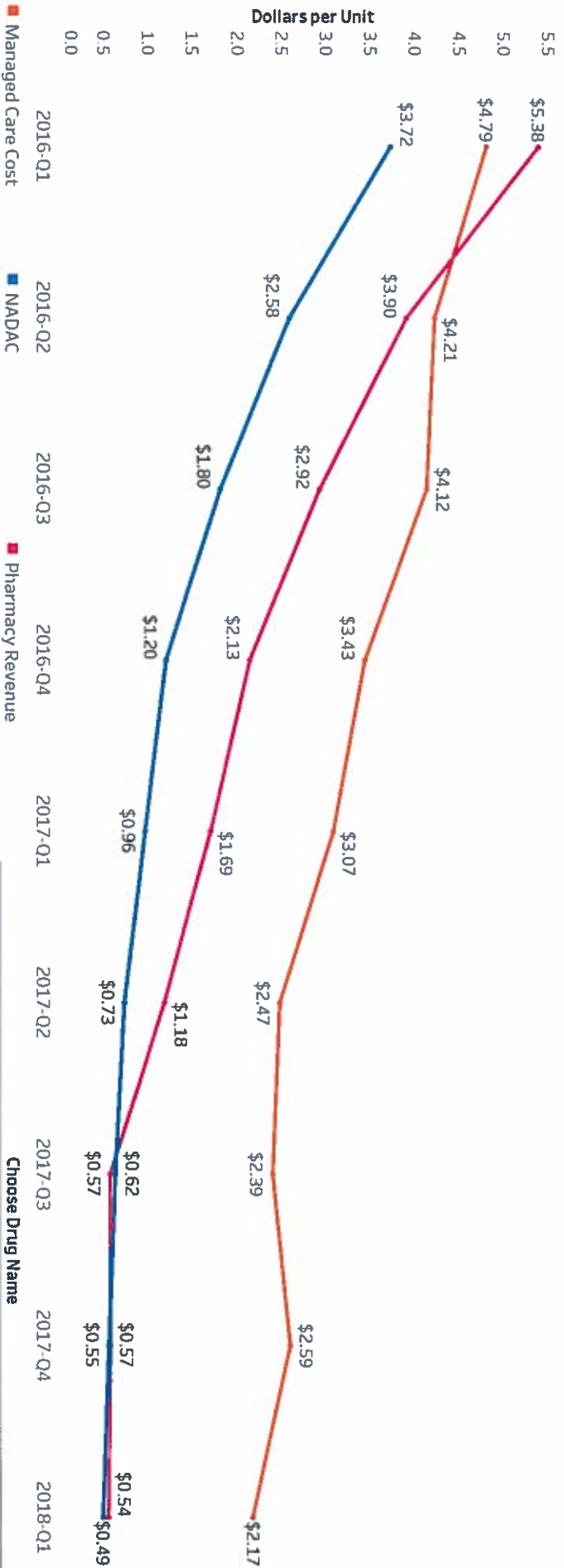
3AXIS Advisors

# ESOMEPRAZOLE MAG DR 40 MG CAP

April 1, 2017 - March 31, 2018 Cost Breakdown - NY Medicaid Managed Care

NADAC Ingredient Cost	Pharmacy Margin Dollars (NADAC-based)	Spread Dollars	Total Amount Reimbursed
\$178,809	\$38,260	\$494,877	\$711,946

Managed Care Cost vs. Pharmacy Revenue vs. NADAC



ESOMEPRAZOLE MAG DR 40 MG CAP

Choose Drug Name

3AXIS Advisors

# EXEMESTANE 25 MG TABLET

April 1, 2017 - March 31, 2018 Cost Breakdown - NY Medicaid Managed Care

NADAC Ingredient Cost

Pharmacy Margin Dollars  
(NADAC-based)

Spread Dollars

Total Amount Reimbursed

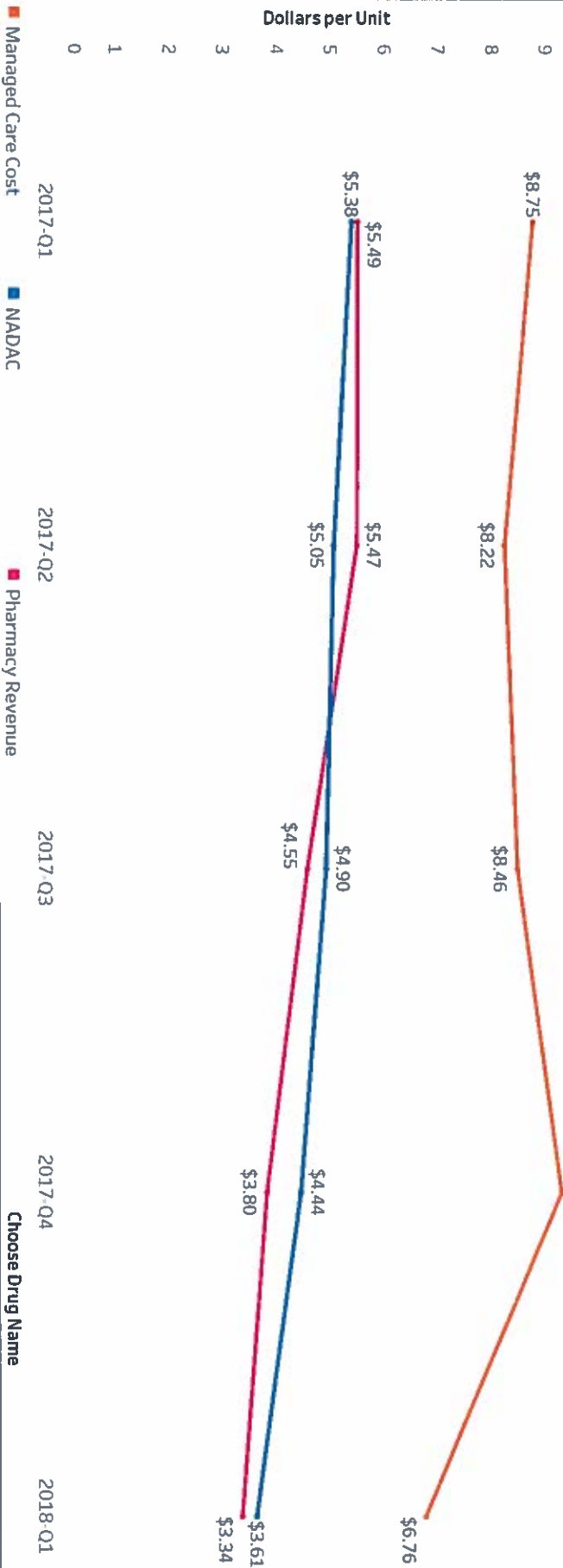
\$516,347

(\$21,664)

\$438,735

\$933,418

Managed Care Cost vs. Pharmacy Revenue vs. NADAC



EXEMESTANE 25 MG TABLET

Choose Drug Name

3AXIS Advisors

# HYDROXYCHLOROQUINE 200 MG TAB

April 1, 2017 - March 31, 2018 Cost Breakdown - NY Medicaid Managed Care

NADAC Ingredient Cost

Pharmacy Margin Dollars  
(NADAC-based)

Spread Dollars

Total Amount Reimbursed

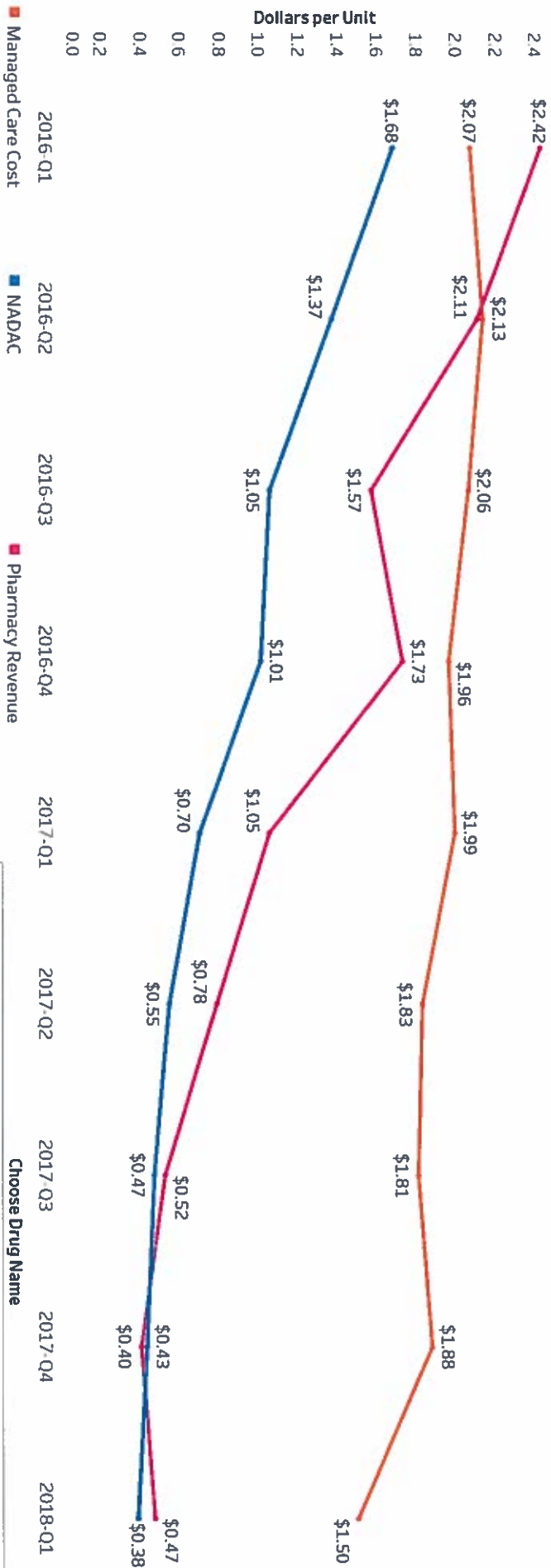
\$1,120,582

\$215,089

\$2,954,580

\$4,290,250

Managed Care Cost vs. Pharmacy Revenue vs. NADAC



HYDROXYCHLOROQUINE 200 MG TAB

Choose Drug Name

3AXIS Advisors

# LAMIVUDINE HBV 100 MG TABLET

April 1, 2017 - March 31, 2018 Cost Breakdown - NY Medicaid Managed Care

NADAC Ingredient Cost

Pharmacy Margin Dollars  
(NADAC-based)

Spread Dollars

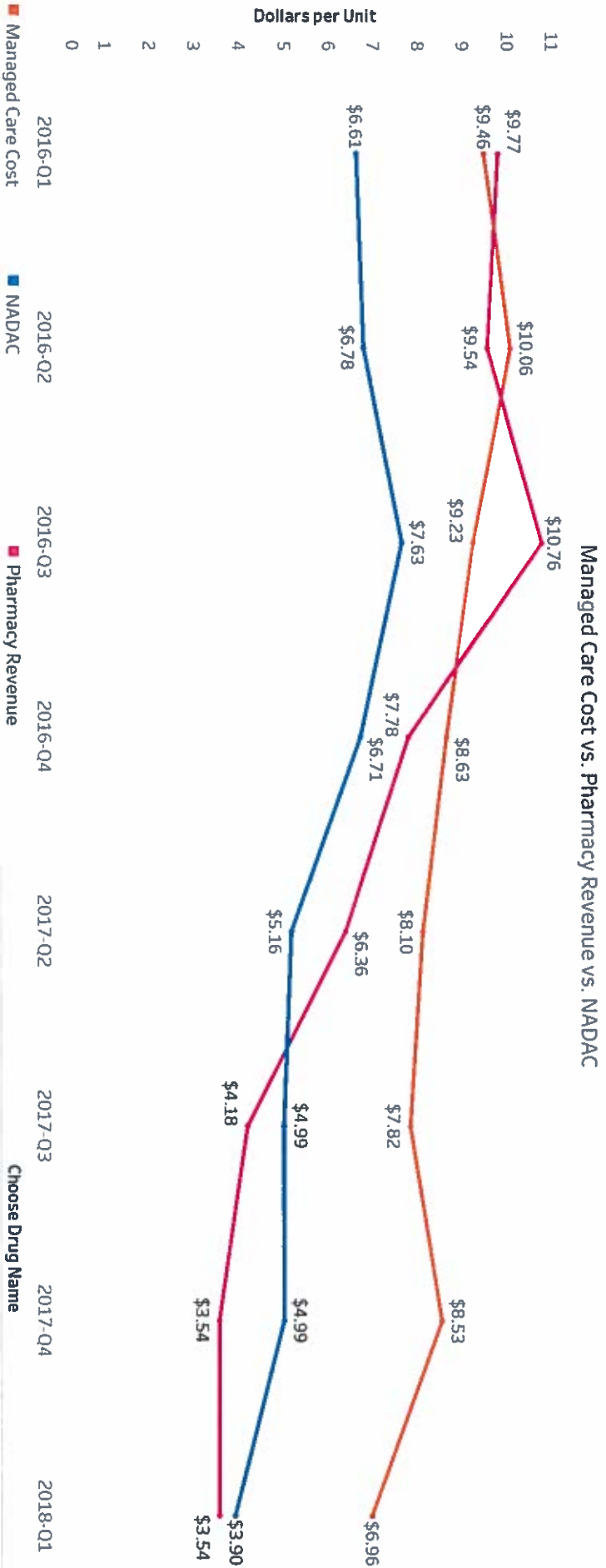
Total Amount Reimbursed

\$96,923

(\$12,847)

\$77,891

\$161,967



LAMIVUDINE HBV 100 MG TABLET

Choose Drug Name

3AXIS Advisors

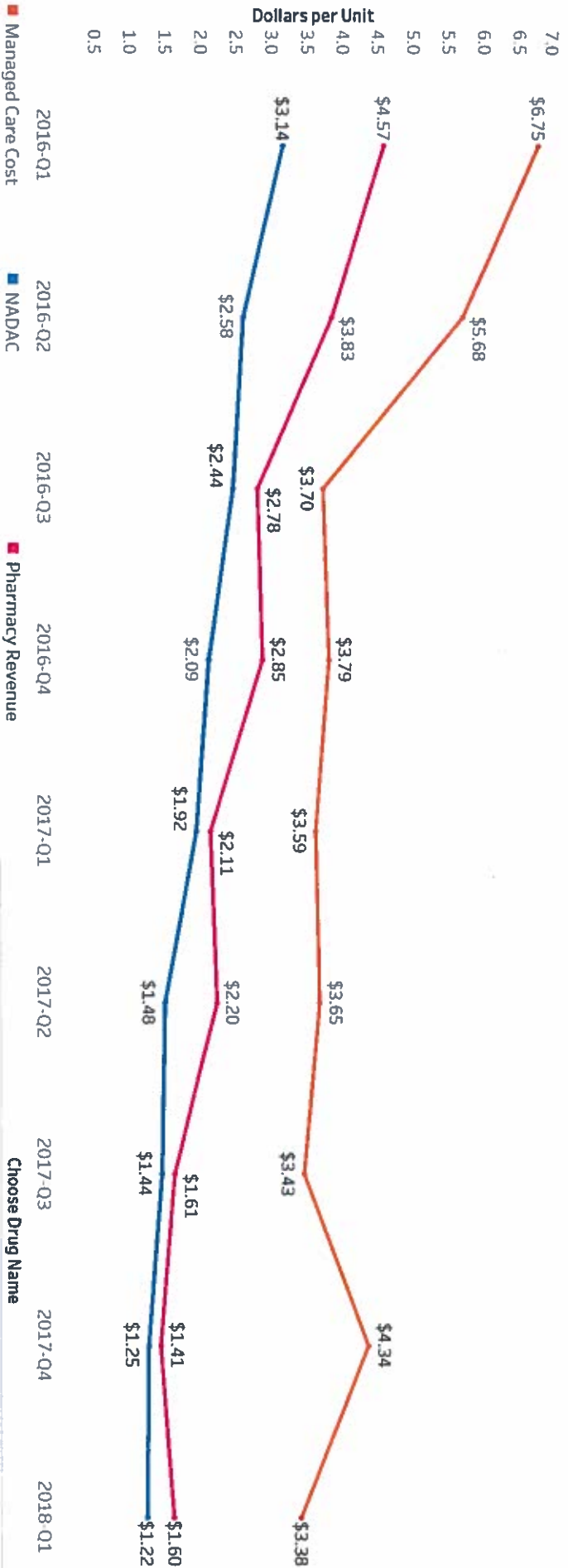


# LAMIVUDINE-ZIDOVUDINE TABLET

April 1, 2017 - March 31, 2018 Cost Breakdown - NY Medicaid Managed Care

NADAC Ingredient Cost	Pharmacy Margin Dollars (NADAC-based)	Spread Dollars	Total Amount Reimbursed
\$126,763	\$45,540	\$161,279	\$333,582

Managed Care Cost vs. Pharmacy Revenue vs. NADAC



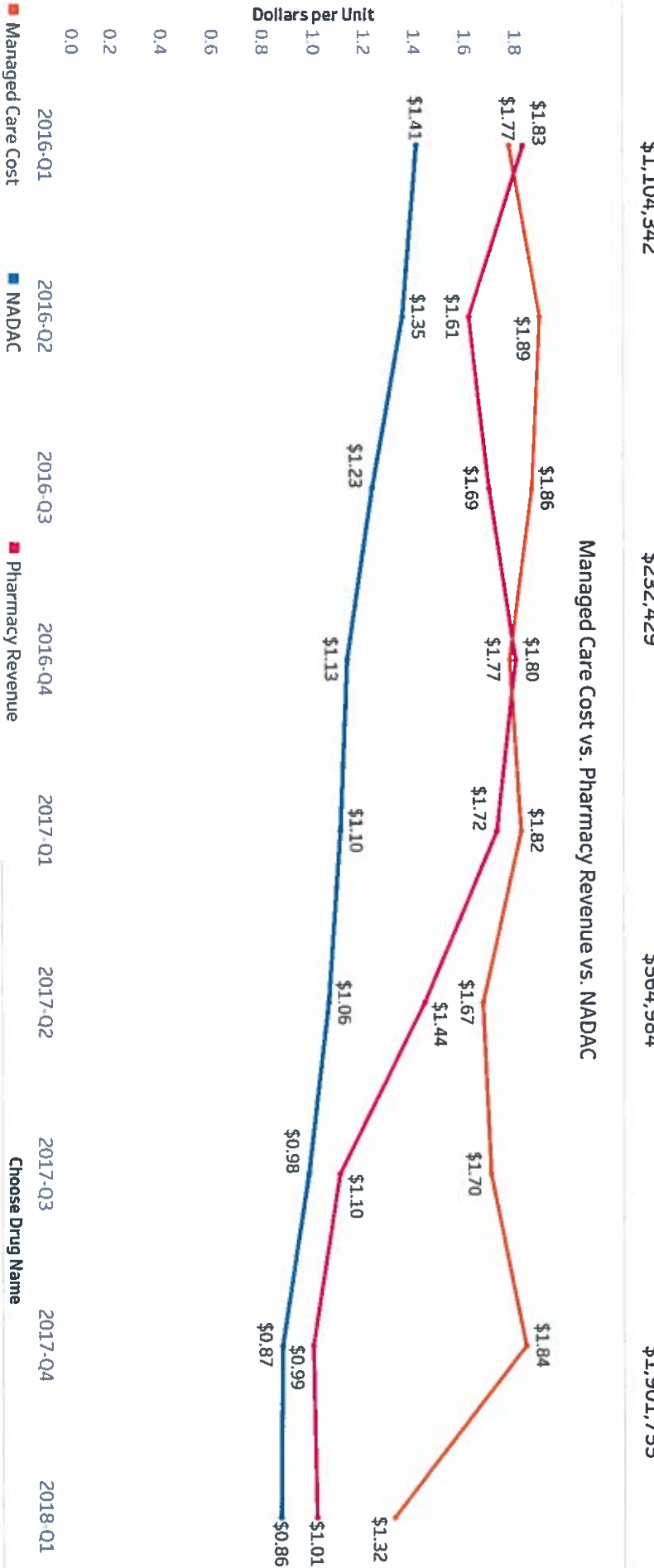
LAMIVUDINE-ZIDOVUDINE TABLET

Choose Drug Name

# METHOTREXATE 2.5 MG TABLET

April 1, 2017 - March 31, 2018 Cost Breakdown - NY Medicaid Managed Care

NADAC Ingredient Cost	Pharmacy Margin Dollars (NADAC-based)	Spread Dollars	Total Amount Reimbursed
\$1,104,342	\$232,429	\$564,984	\$1,901,755



METHOTREXATE 2.5 MG TABLET

Choose Drug Name

3AXIS Advisors

# MYCOPHENOLATE 250 MG CAPSULE

April 1, 2017 - March 31, 2018 Cost Breakdown - NY Medicaid Managed Care

NADAC Ingredient Cost

Pharmacy Margin Dollars  
(NADAC-based)

Spread Dollars

Total Amount Reimbursed

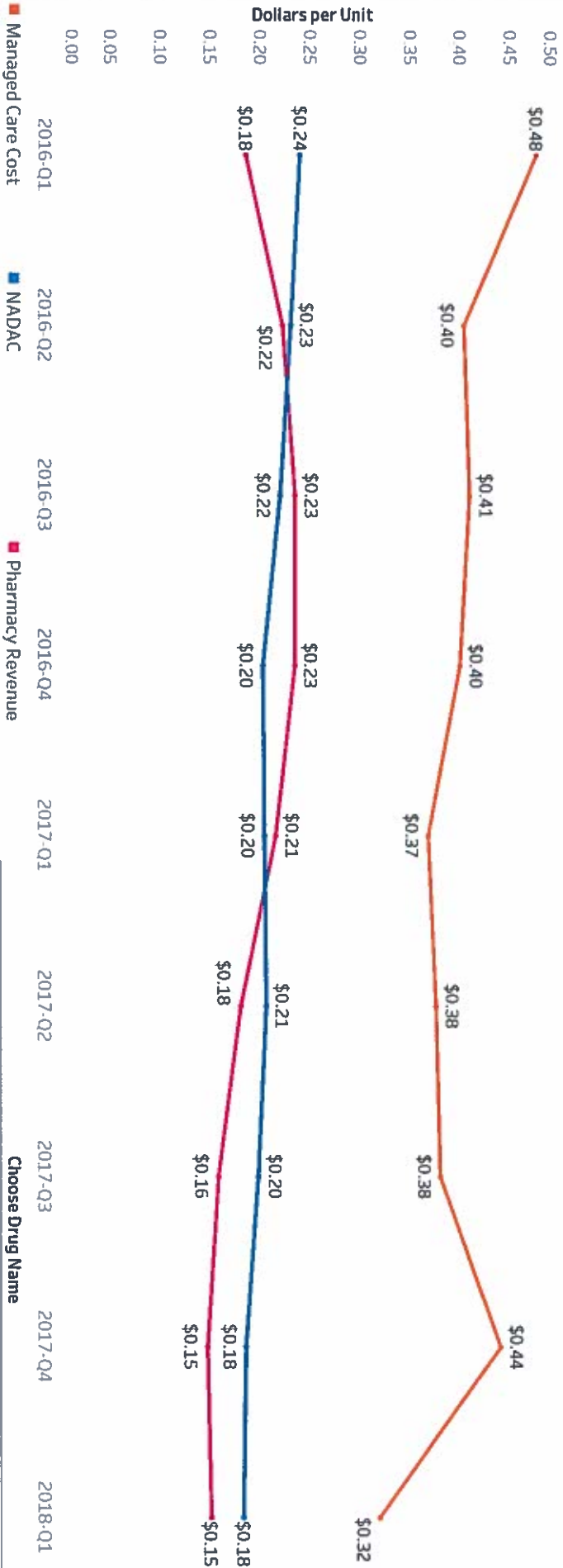
\$46,695

(\$8,249)

\$53,529

\$91,975

Managed Care Cost vs. Pharmacy Revenue vs. NADAC



MYCOPHENOLATE 250 MG CAPSULE

Choose Drug Name

3AXIS Advisors

# MYCOPHENOLATE 500 MG TABLET

April 1, 2017 - March 31, 2018 Cost Breakdown - NY Medicaid Managed Care

**NADAC Ingredient Cost**

**Pharmacy Margin Dollars  
(NADAC-based)**

**Spread Dollars**

**Total Amount Reimbursed**

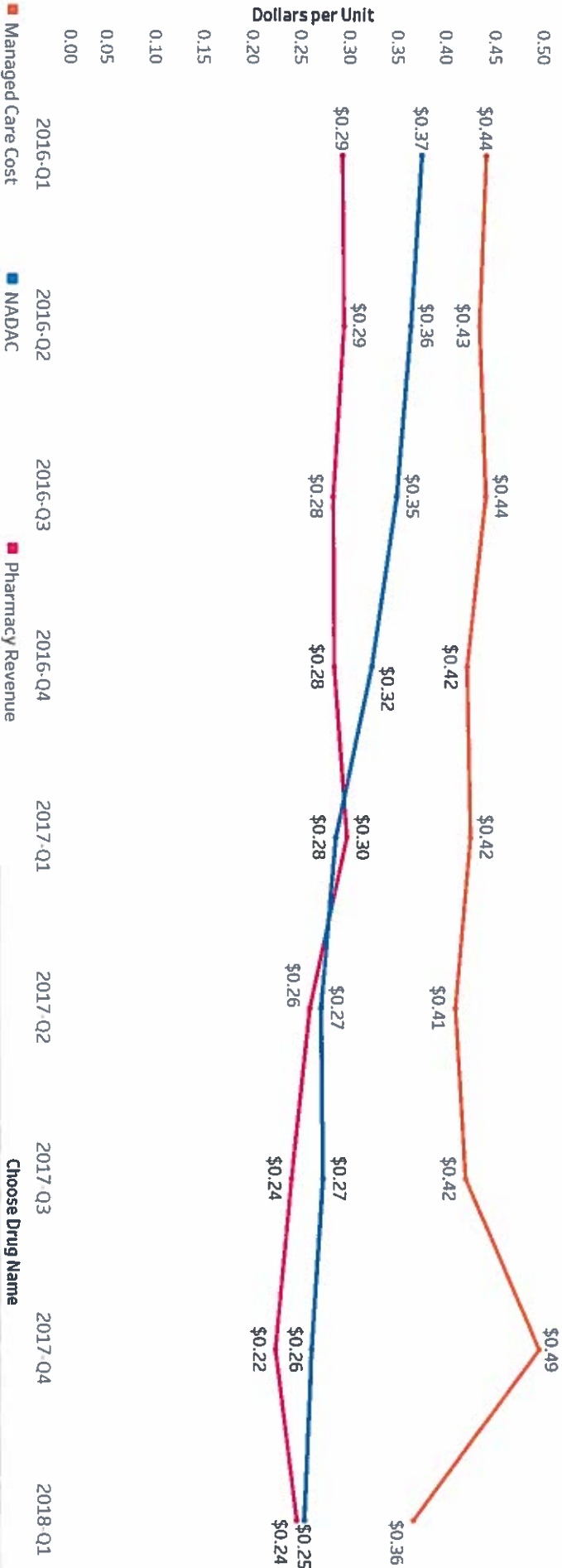
\$264,032

(\$22,121)

\$175,578

\$417,490

Managed Care Cost vs. Pharmacy Revenue vs. NADAC



MYCOPHENOLATE 500 MG TABLET

Choose Drug Name

3AXIS Advisors

# OLANZAPINE 10 MG TABLET

April 1, 2017 - March 31, 2018 Cost Breakdown - NY Medicaid Managed Care

NADAC Ingredient Cost

Pharmacy Margin Dollars  
(NADAC-based)

Spread Dollars

Total Amount Reimbursed

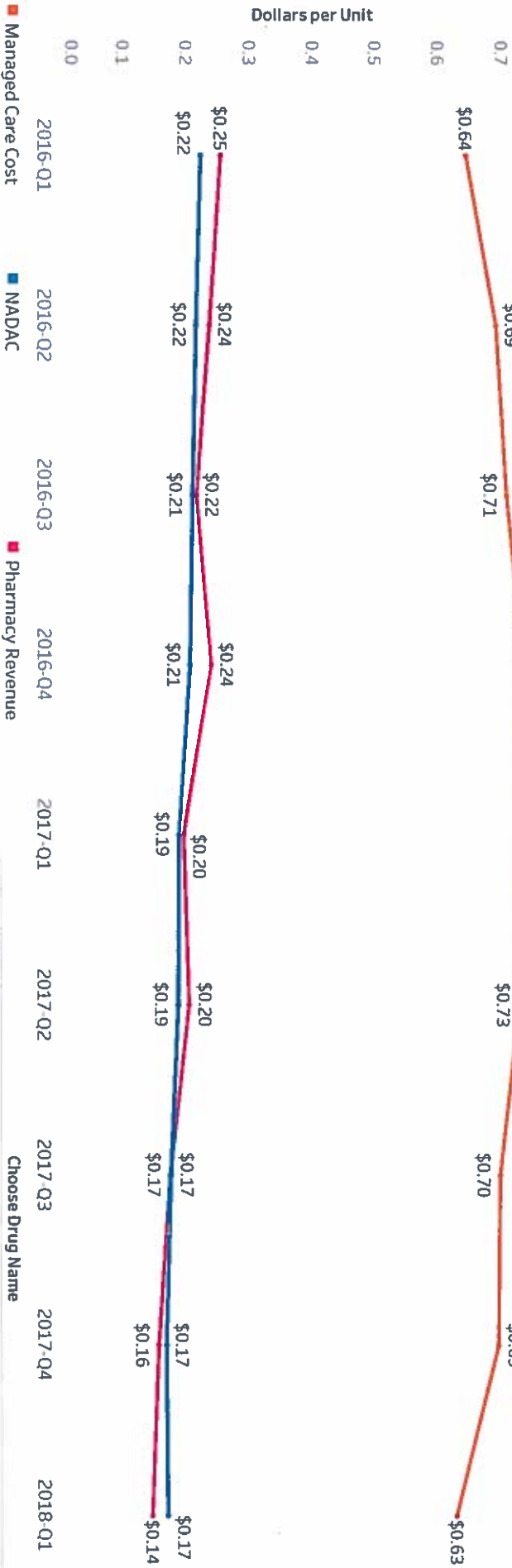
\$107,438

(\$2,993)

\$318,334

\$422,779

Managed Care Cost vs. Pharmacy Revenue vs. NADAC



OLANZAPINE 10MG TABLET

Choose Drug Name

# OLANZAPINE 20 MG TABLET

April 1, 2017 - March 31, 2018 Cost Breakdown - NY Medicaid Managed Care

NADAC Ingredient Cost

Pharmacy Margin Dollars  
(NADAC-based)

Spread Dollars

Total Amount Reimbursed

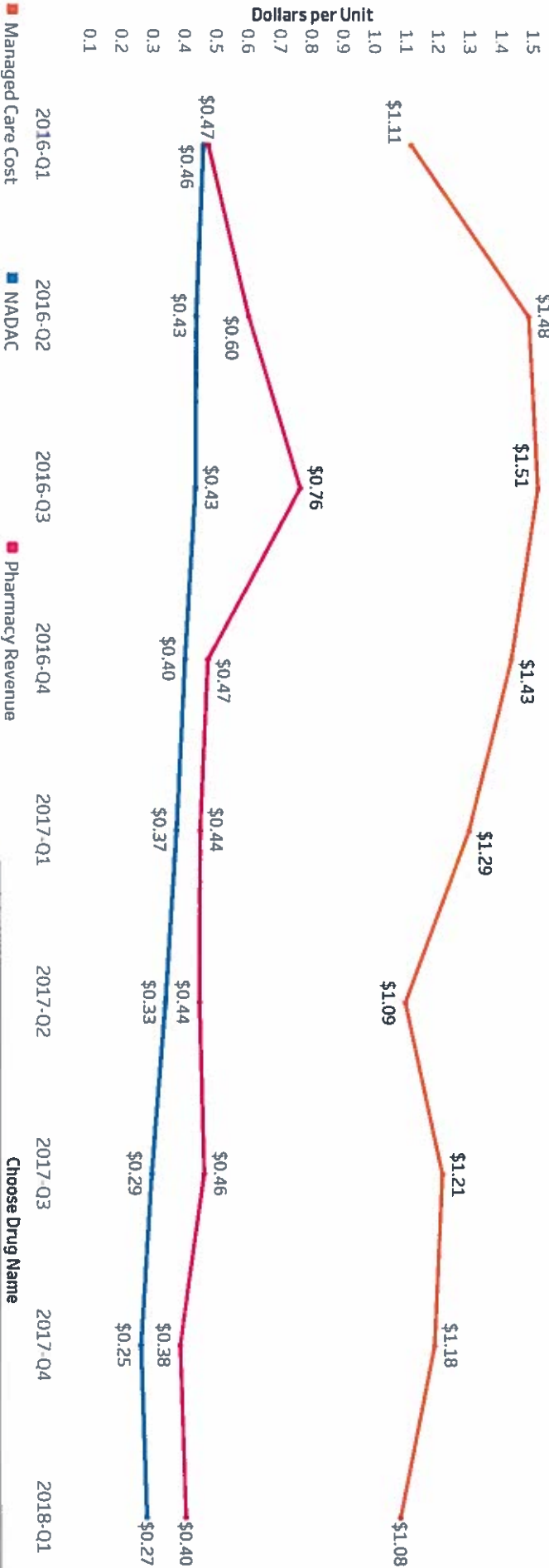
\$99,419

\$45,330

\$251,862

\$396,611

Managed Care Cost vs. Pharmacy Revenue vs. NADAC



OLANZAPINE 20 MG TABLET

Choose Drug Name

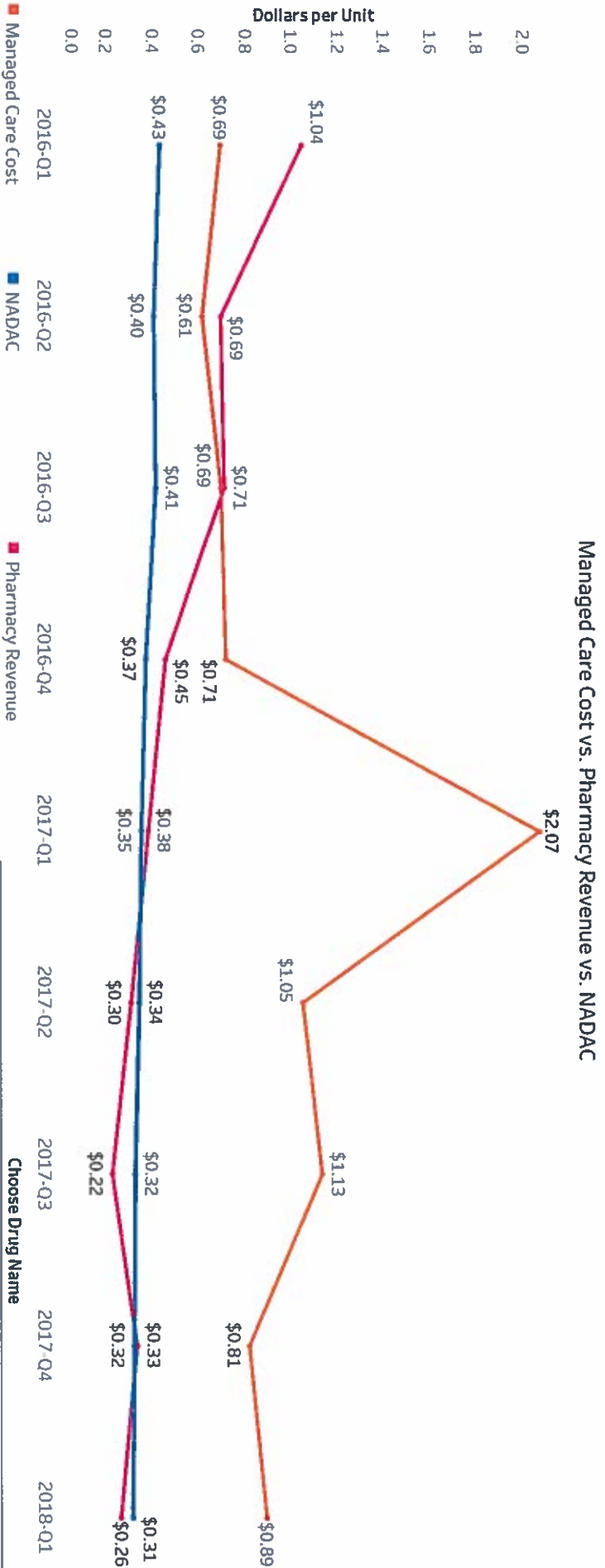
3AXIS Advisors

# ONDANSETRON ODT 4 MG TABLET

April 1, 2017 - March 31, 2018 Cost Breakdown - NY Medicaid Managed Care

NADAC Ingredient Cost      Pharmacy Margin Dollars (NADAC-based)      Spread Dollars      Total Amount Reimbursed

\$379,470      (\$51,634)      \$802,570      \$1,130,406



ONDANSETRON ODT 4 MG TABLET

Choose Drug Name

# OXYBUTYNIN CL ER 15 MG TABLET

April 1, 2017 - March 31, 2018 Cost Breakdown - NY Medicaid Managed Care

NADAC Ingredient Cost

Pharmacy Margin Dollars  
(NADAC-based)

Spread Dollars

Total Amount Reimbursed

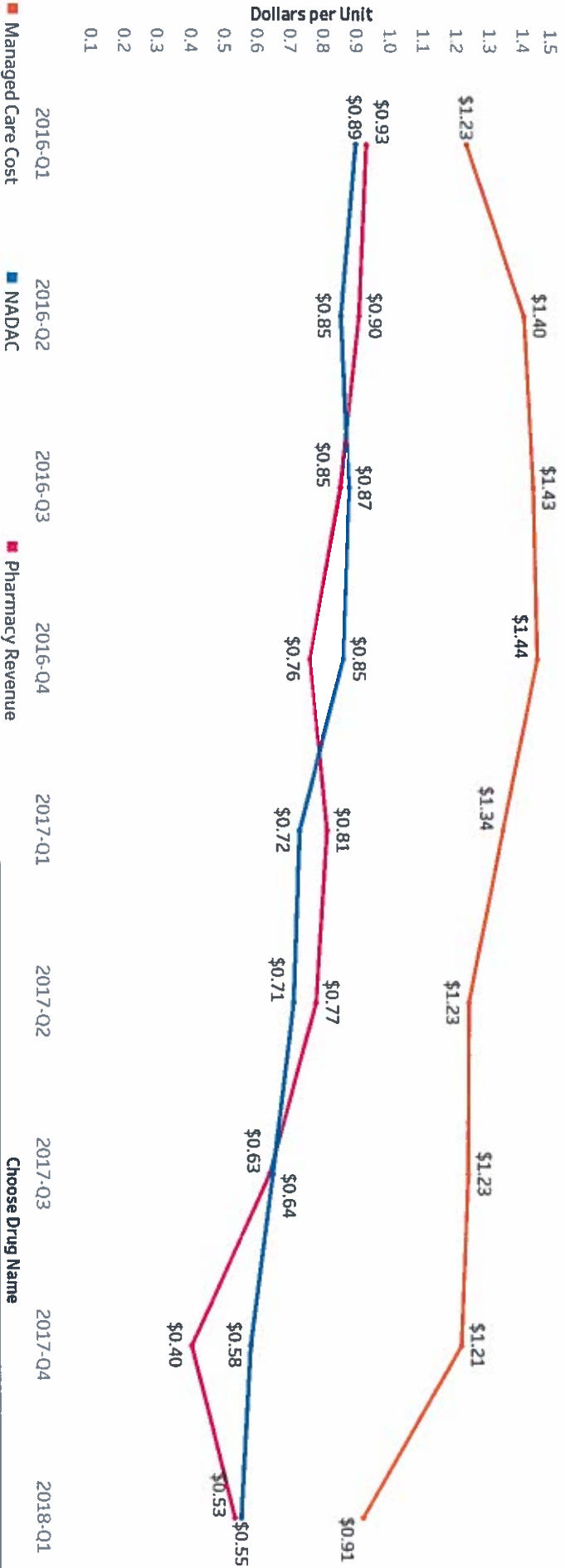
\$108,842

(\$6,464)

\$98,886

\$201,264

Managed Care Cost vs. Pharmacy Revenue vs. NADAC



OXYBUTYNIN CL ER 15 MG TABLET

Choose Drug Name

3AXIS Advisors



# OXYCODONE HCL 30 MG TABLET

April 1, 2017 - March 31, 2018 Cost Breakdown - NY Medicaid Managed Care

NADAC Ingredient Cost

Pharmacy Margin Dollars  
(NADAC-based)

Spread Dollars

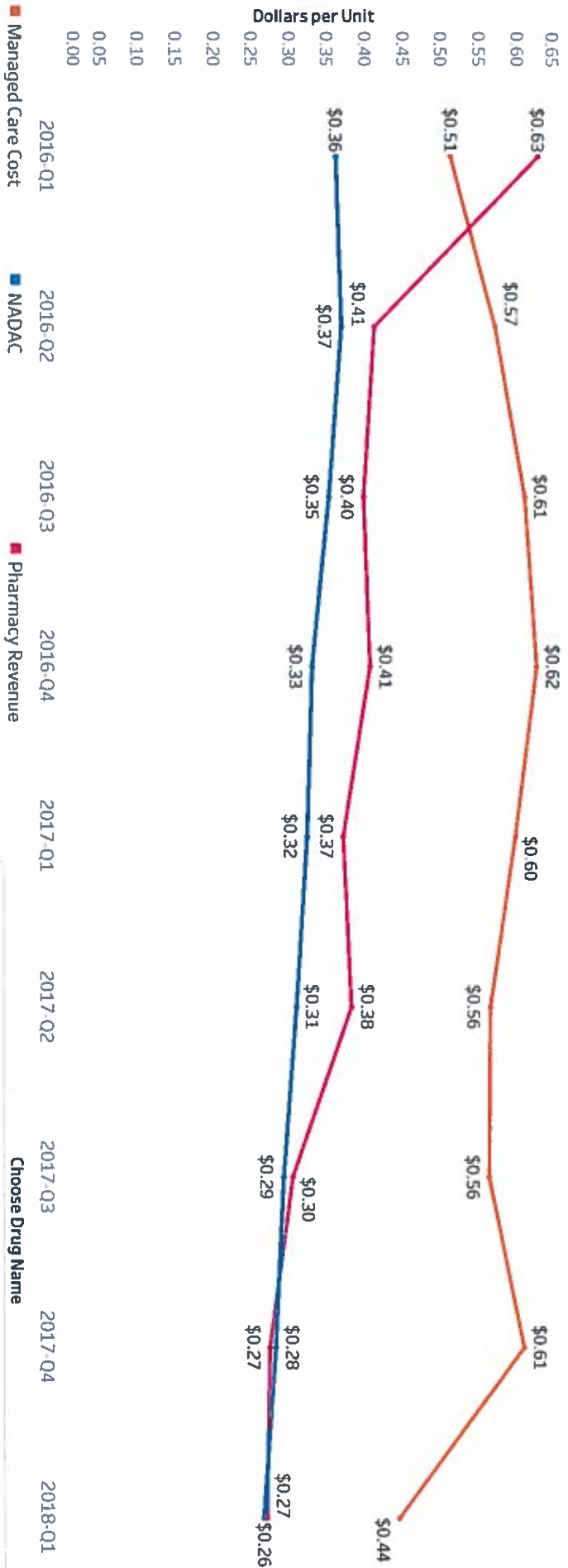
Total Amount Reimbursed

\$1,898,882

\$130,374

\$1,596,426

\$3,625,682



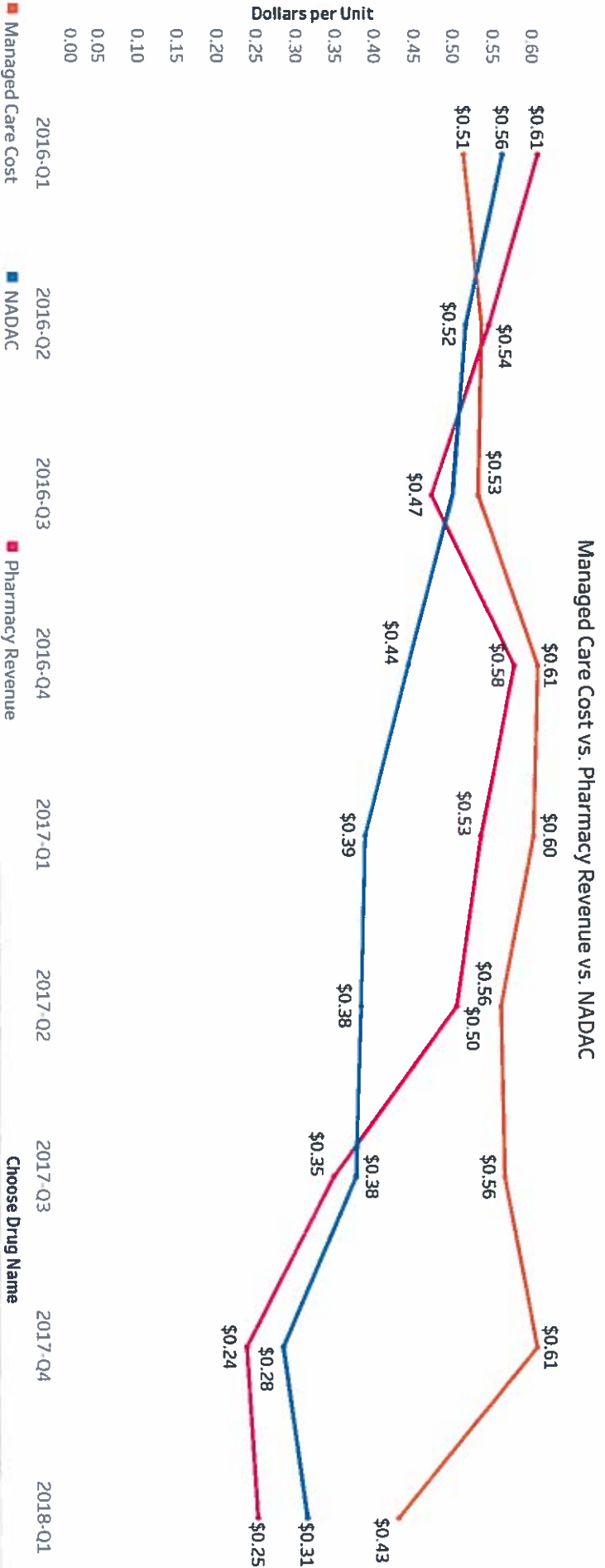
OXYCODONE HCL 30 MG TABLET

Choose Drug Name

# OXYCODONE-ACETAMINOPHEN 7.5-325 MG TABLET

April 1, 2017 - March 31, 2018 Cost Breakdown - NY Medicaid Managed Care

NADAC Ingredient Cost	Pharmacy Margin Dollars (NADAC-based)	Spread Dollars	Total Amount Reimbursed
\$129,749	(\$2,221)	\$80,022	\$207,550



OXYCODONE-ACETAMINOPHEN 7.5-325 MG TABLET

Choose Drug Name

3AXIS Advisors

# PIOGLITAZONE HCL 30 MG TABLET

April 1, 2017 - March 31, 2018 Cost Breakdown - NY Medicaid Managed Care

**NADAC Ingredient Cost**

**Pharmacy Margin Dollars  
(NADAC-based)**

**Spread Dollars**

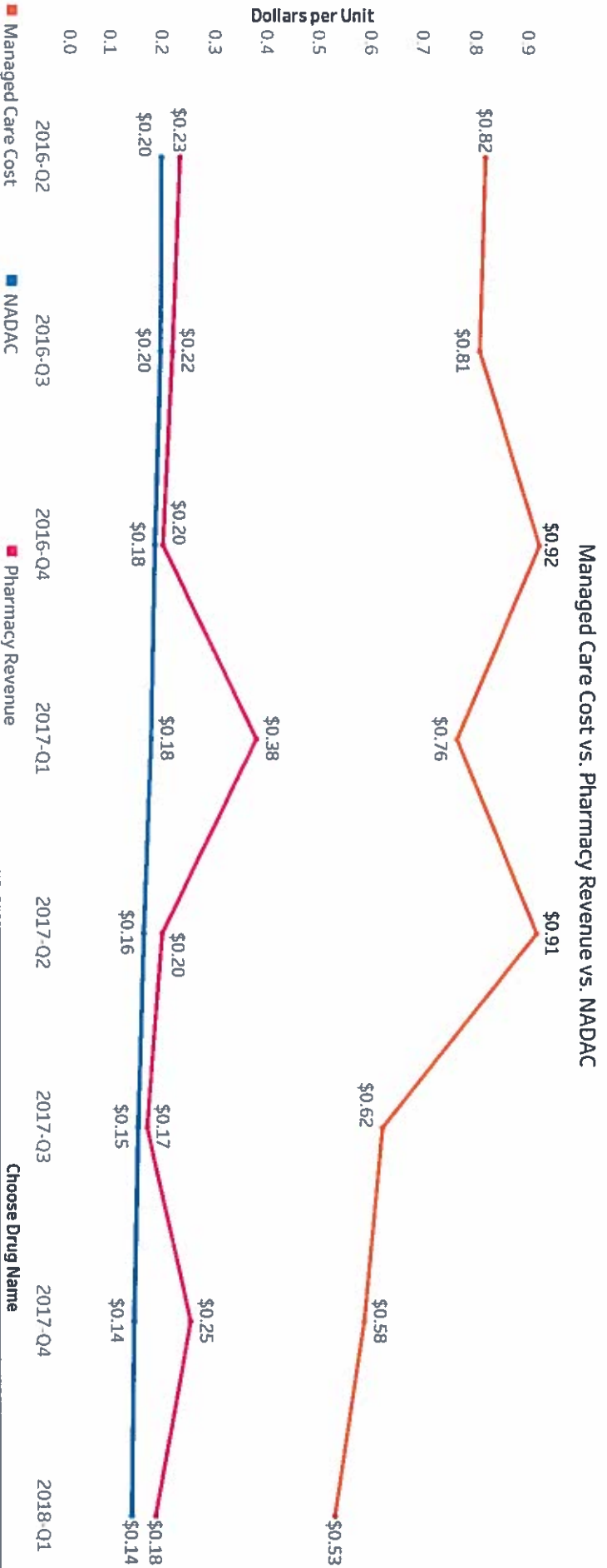
**Total Amount Reimbursed**

\$31,362

\$11,282

\$97,465

\$140,109



PIOGLITAZONE HCL 30 MG TABLET

Choose Drug Name

3AXIS Advisors

# QUETIAPINE FUMARATE 300 MG TAB

April 1, 2017 - March 31, 2018 Cost Breakdown - NY Medicaid Managed Care

<b>NADAC Ingredient Cost</b>	<b>Pharmacy Margin Dollars (NADAC-based)</b>	<b>Spread Dollars</b>	<b>Total Amount Reimbursed</b>
\$216,701	\$41,779	\$391,280	\$649,760



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QUETIAPINE FUMARATE 300 MG TAB

Choose Drug Name

# ROSUVASTATIN CALCIUM 20 MG TAB

April 1, 2017 - March 31, 2018 Cost Breakdown - NY Medicaid Managed Care

NADAC Ingredient Cost

Pharmacy Margin Dollars  
(NADAC-based)

Spread Dollars

Total Amount Reimbursed

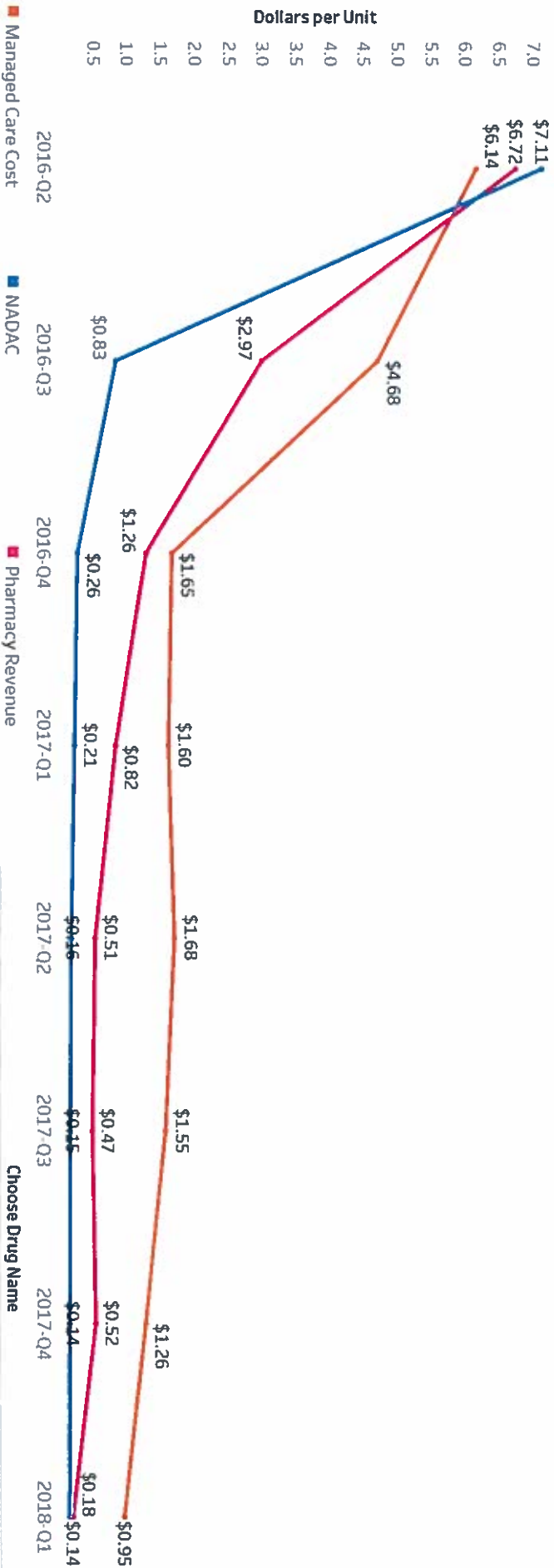
\$30,756

\$55,408

\$200,698

\$286,863

Managed Care Cost vs. Pharmacy Revenue vs. NADAC



ROSUVASTATIN CALCIUM 20 MG TAB

Choose Drug Name

3AXIS Advisors

# TACROLIMUS 0.5 MG CAPSULE

April 1, 2017 - March 31, 2018 Cost Breakdown - NY Medicaid Managed Care

NADAC Ingredient Cost

Pharmacy Margin Dollars  
(NADAC-based)

Spread Dollars

Total Amount Reimbursed

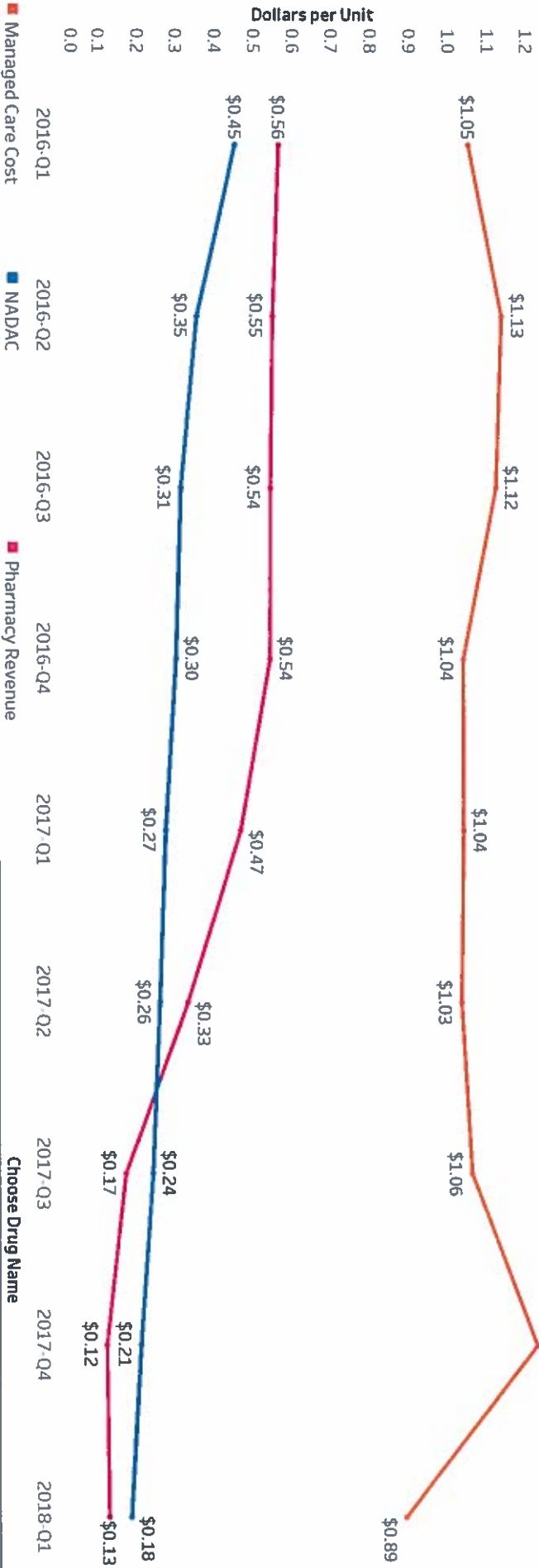
\$98,523

(\$16,248)

\$385,709

\$467,984

Managed Care Cost vs. Pharmacy Revenue vs. NADAC



TACROLIMUS 0.5MG CAPSULE

Choose Drug Name

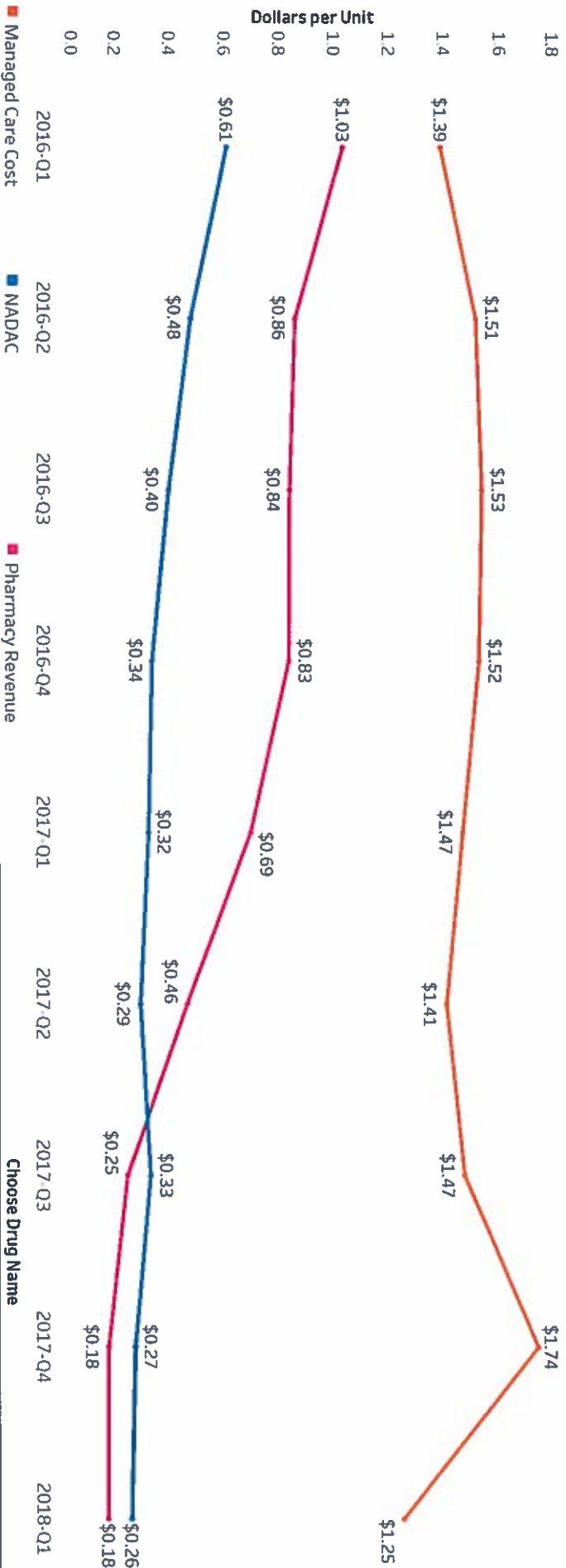
3AXIS Advisors

# TACROLIMUS 1 MG CAPSULE

April 1, 2017 - March 31, 2018 Cost Breakdown - NY Medicaid Managed Care

NADAC Ingredient Cost	Pharmacy Margin Dollars (NADAC-based)	Spread Dollars	Total Amount Reimbursed
\$823,964	(\$60,438)	\$3,377,869	\$4,141,395

Managed Care Cost vs. Pharmacy Revenue vs. NADAC



TACROLIMUS 1 MG CAPSULE

Choose Drug Name

# TACROLIMUS 5 MG CAPSULE

April 1, 2017 - March 31, 2018 Cost Breakdown - NY Medicaid Managed Care

NADAC Ingredient Cost

Pharmacy Margin Dollars  
(NADAC-based)

Spread Dollars

Total Amount Reimbursed

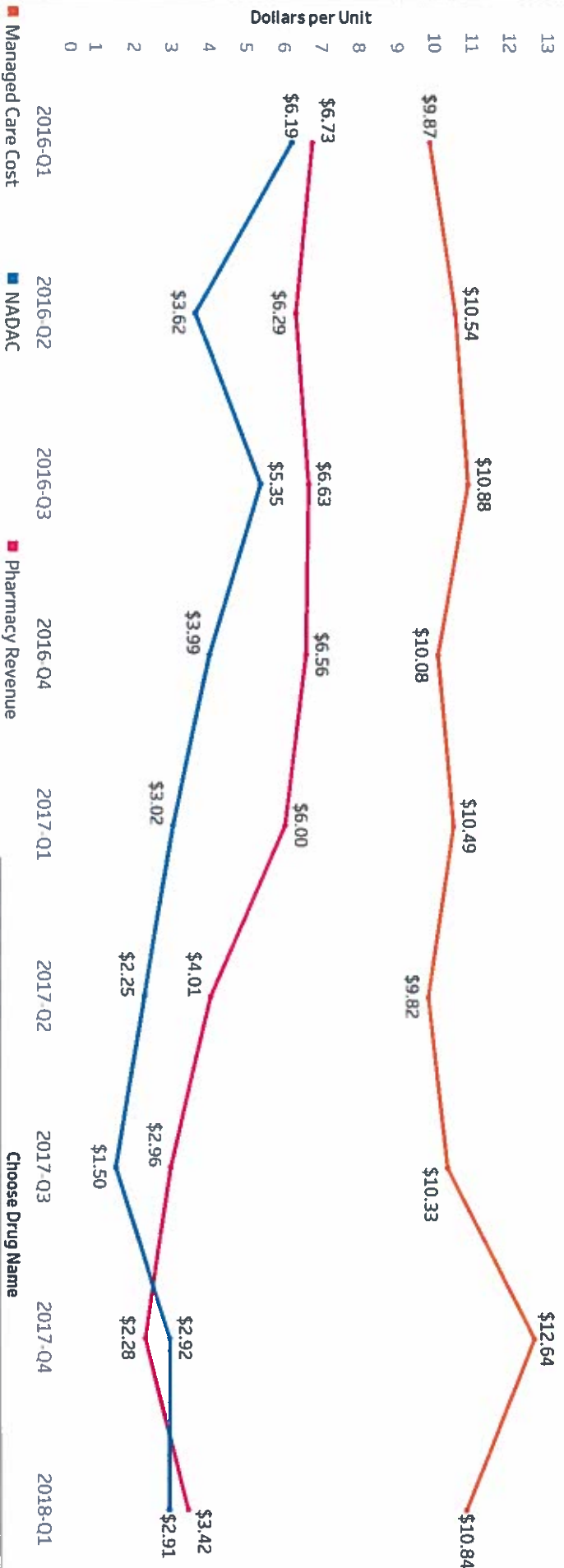
\$471,198

\$146,520

\$1,524,717

\$2,142,435

Managed Care Cost vs. Pharmacy Revenue vs. NADAC



TACROLIMUS 5MG CAPSULE

Choose Drug Name

3AXIS Advisors



# VALACYCLOVIR HCL 1 GRAM TABLET

April 1, 2017 - March 31, 2018 Cost Breakdown - NY Medicaid Managed Care

NADAC Ingredient Cost

Pharmacy Margin Dollars  
(NADAC-based)

Spread Dollars

Total Amount Reimbursed

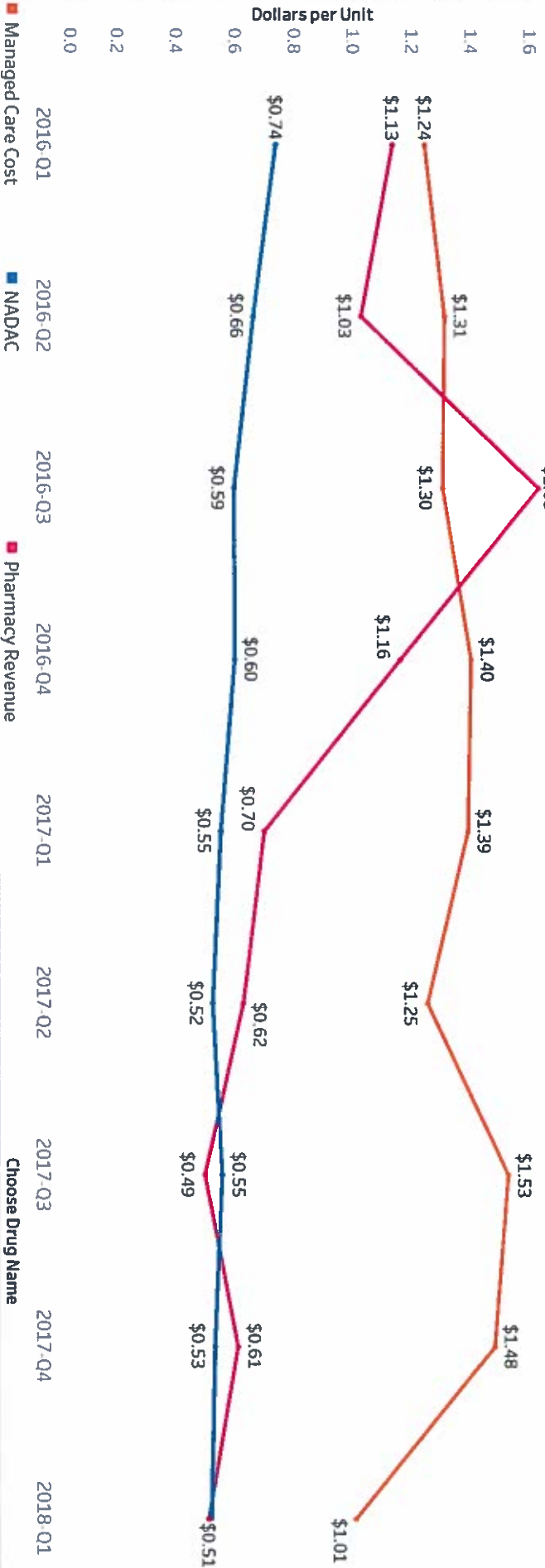
\$524,726

\$47,587

\$752,855

\$1,325,168

Managed Care Cost vs. Pharmacy Revenue vs. NADAC



VALACYCLOVIR HCL 1 GRAM TABLET

Choose Drug Name

3AXIS Advisors

# VALACYCLOVIR HCL 500 MG TABLET

April 1, 2017 - March 31, 2018 Cost Breakdown - NY Medicaid Managed Care

NADAC Ingredient Cost

Pharmacy Margin Dollars  
(NADAC-based)

Spread Dollars

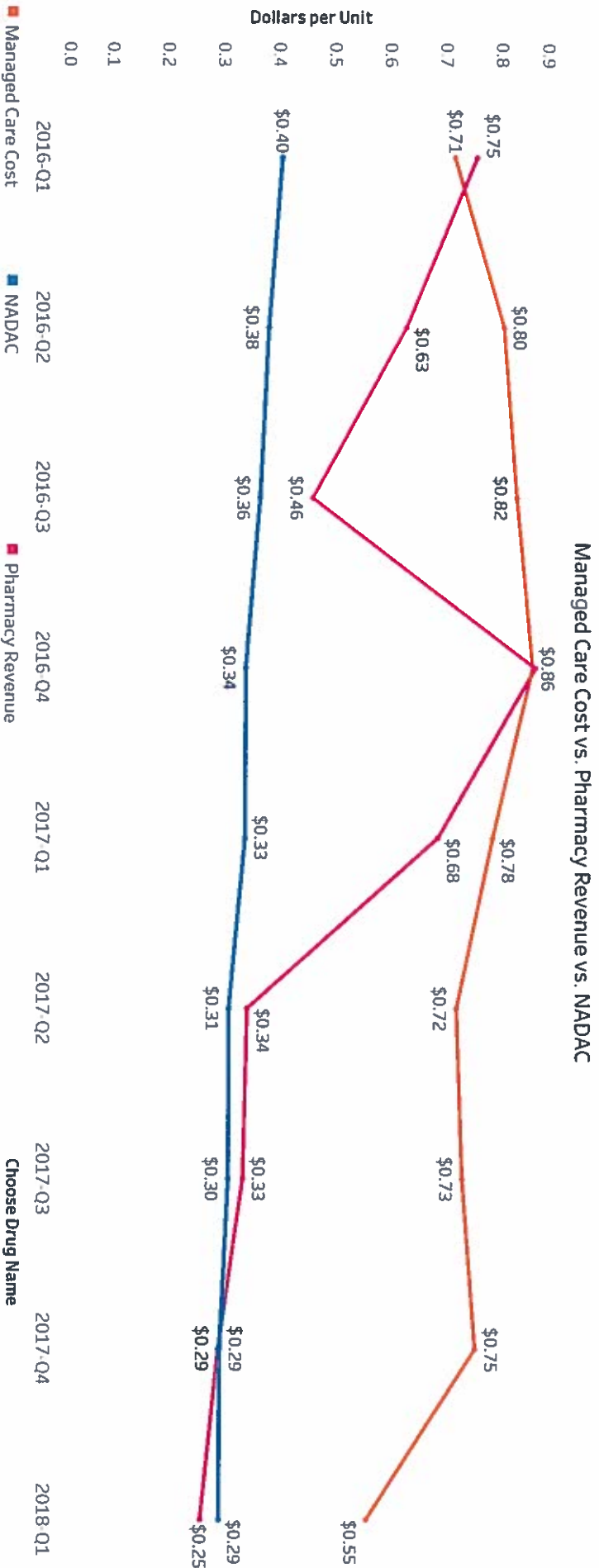
Total Amount Reimbursed

\$282,638

\$5,728

\$369,771

\$658,137



VALACYCLOVIR HCL 500 MG TABLET

Choose Drug Name

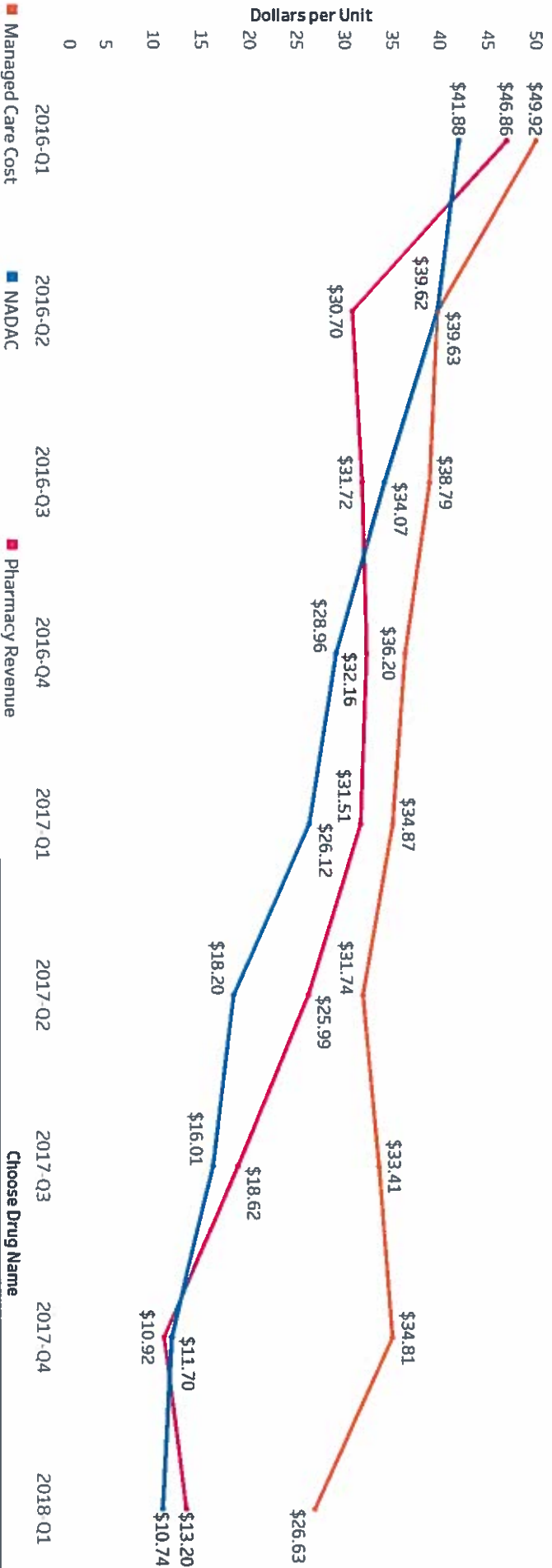
3AXIS Advisors

# VALGANICICLOVIR 450 MG TABLET

April 1, 2017 - March 31, 2018 Cost Breakdown - NY Medicaid Managed Care

NADAC Ingredient Cost	Pharmacy Margin Dollars (NADAC-based)	Spread Dollars	Total Amount Reimbursed
\$1,785,697	\$396,015	\$1,722,791	\$3,904,503

Managed Care Cost vs. Pharmacy Revenue vs. NADAC



VALGANICICLOVIR 450 MG TABLET

Choose Drug Name

3AXIS Advisors

# VALSARTAN 160 MG TABLET

April 1, 2017 - March 31, 2018 Cost Breakdown - NY Medicaid Managed Care

NADAC Ingredient Cost

Pharmacy Margin Dollars  
(NADAC-based)

Spread Dollars

Total Amount Reimbursed

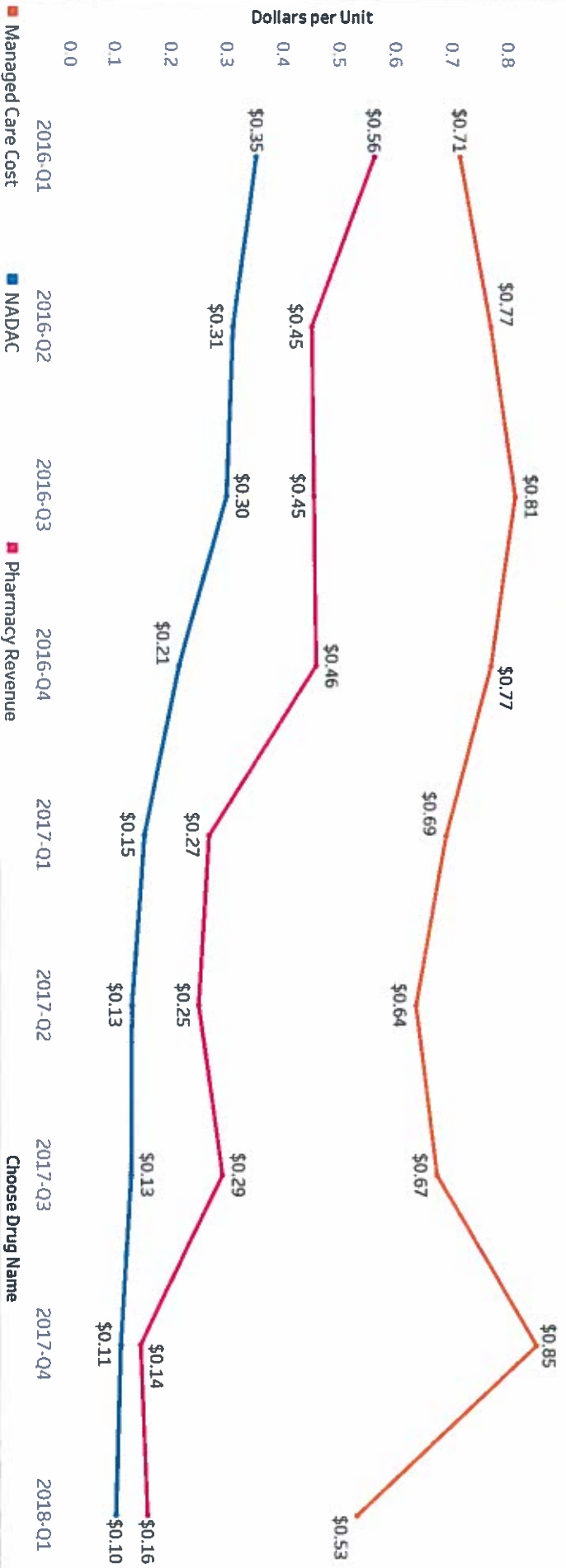
\$54,475

\$35,658

\$231,747

\$321,880

Managed Care Cost vs. Pharmacy Revenue vs. NADAC



VALSARTAN 160 MG TABLET

Choose Drug Name

3AXIS Advisors

# ZOLPIDEM TARTER 12.5 MG TAB

April 1, 2017 - March 31, 2018 Cost Breakdown - NY Medicaid Managed Care

NADAC Ingredient Cost

Pharmacy Margin Dollars  
(NADAC-based)

Spread Dollars

Total Amount Reimbursed

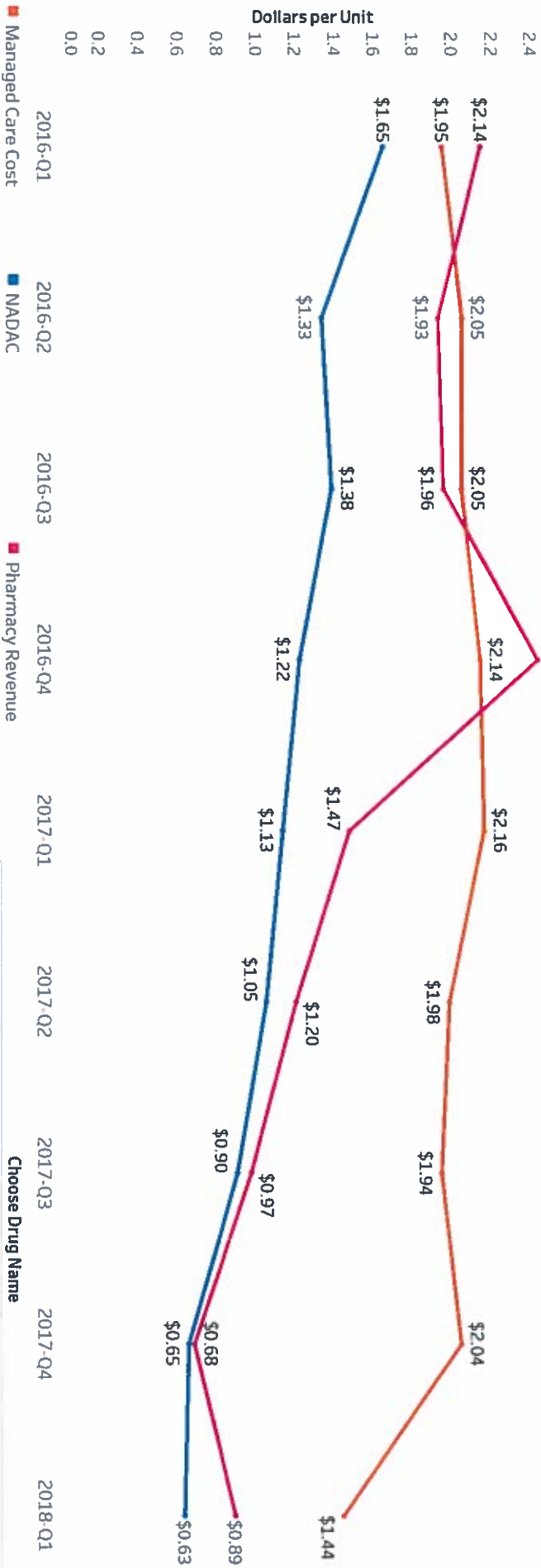
\$172,557

\$28,778

\$182,824

\$384,159

Managed Care Cost vs. Pharmacy Revenue vs. NADAC



ZOLPIDEM TARTER 12.5MG TAB

Choose Drug Name

3AXIS Advisors