



The Reverse Auction Opportunity

How New Hampshire can save tens of millions of dollars a year
on prescription drugs for state employees

By
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Executive Summary

New Hampshire taxpayers can expect to save an estimated \$17.8 million – \$22.2 million annually if the state switches to an online reverse auction process for its pharmacy benefit manager (PBM) contracting.

Over the life of New Hampshire's \$212 million, 3-year contract for PBM services that began January 1, 2019, the total savings would range between \$42.5 million and \$53.1 million.

The savings would come from a change in the way New Hampshire solicits bids for its PBM contract.

Pharmacy benefit managers (PBMs) administer prescription drug benefits for commercial and government health plans. PBMs negotiate prices with drug manufacturers, maintain the plan's drug formulary (the list of approved drugs), and process claims. New Hampshire used a traditional Request for Proposal (RFP) process when it signed a three-year, \$212.5 million PBM contract with Express Scripts in 2018. Using an online reverse auction rather than a traditional RFP process could have saved the state millions of dollars, this analysis shows.

In an online reverse auction, pre-qualified suppliers provide competing bids (typically over multiple rounds) to a single buyer. It is the reverse of the more familiar forward auction, in which buyers compete to purchase a product or service from a single seller. For PBM services, New Hampshire would be the single buyer inviting several PBMs (the multiple sellers) to bid on providing PBM services to the state over a defined time period.

In the RFP process New Hampshire currently uses, the state requests proposals for a multi-year PBM contract, and vendors make offers. These proposals can vary in detail because each vendor uses its own drug formulary. The state compares the proposals and selects one.

In an online reverse auction process, New Hampshire would create its own drug formulary and open the auction to bidding. At the end of the first round, the bids would be made public and a second round of bidding would commence. Each vendor would be able to see the other's bid and make a counteroffer. This would continue for a set number of rounds. The process forces vendors to offer the same services and encourages them to compete more aggressively on price.

Public- and private-sector experiences with reverse online auctions illustrate that, when implemented effectively, they save buyers money. The Government Accountability Office found that reverse auctions that included iterative rounds of transparent online bidding reduced federal government costs by 12%. New Jersey's use of a reverse auction for PBM services that included iterative rounds of bidding reduced costs by more than 25%. The private sector has used online reverse auctions for years to produce significant cost savings. The consensus savings range for private companies that use online reverse auctions to purchase inputs is between 10% and 40%, with an average savings of 20%.

Though studies find a savings range between 10% and 40% for reverse online auctions, those far ends represent extremes that are not representative of most experiences. It is more realistic to expect New Hampshire to enjoy savings in the middle of that range. This analysis therefore uses the average savings of 20% as the low-end estimate and New Jersey's savings of 25% as the high-end estimate. Using that narrower middle range eliminates the extremes and offers a more realistic projection of New Hampshire's likely savings. Using that narrower range, we can conclude that New Hampshire would expect to save between \$17.8 million and \$22.2 million annually (based on the \$88.9 million the state spent on prescription drug benefits for employees in SFY 2019) by switching to an online reverse auction process for its PBM contracting.

These savings are meaningful for New Hampshire taxpayers regardless of the timing. However, due to the economic and fiscal consequences of the coronavirus pandemic, it is more imperative than ever for state leaders to find savings as state revenues fall.

Saving Millions by Switching to a Reverse Online Auction

Finding potential budget savings is always an important goal for state government, but the value of these savings is amplified during periods of economic hardship such as the recession related to the coronavirus. Toward this goal, New Hampshire can generate millions of dollars in savings annually by conducting a reverse online auction to select its pharmacy benefit manager (PBM). This paper provides an overview of the evidence demonstrating that savings possibilities exist, then projects the potential savings for the state based on these experiences.

An Opportunity to Improve PBM Efficiency

PBMs are companies that administer prescription drug benefit programs for commercial and government health plans. They are the intermediaries between state health-sponsored health plans, drug manufacturers, and pharmacies. As the intermediary, PBMs are responsible for negotiating prices with drug manufacturers, maintaining the state health insurance plan's drug formulary (the list of approved drugs), and processing claims.

Collectively, the three largest PBMs control 76 percent of the market. The top three PBMs by market share are CVS Caremark, which manages 30 percent of the market, Express Scripts, which manages 23 percent of the market, and Optum Rx, which manages 23 percent of the market.¹

PBMs, which manage the drug benefit for the state's health insurance plan for employees and retirees, are an essential supplier for New Hampshire. Yet, because many adverse incentives have evolved over time in the PBM market, the current system has become complex and rife with waste and inefficiencies. While a complete evaluation of these issues is beyond the scope of this analysis, several problems stand out.

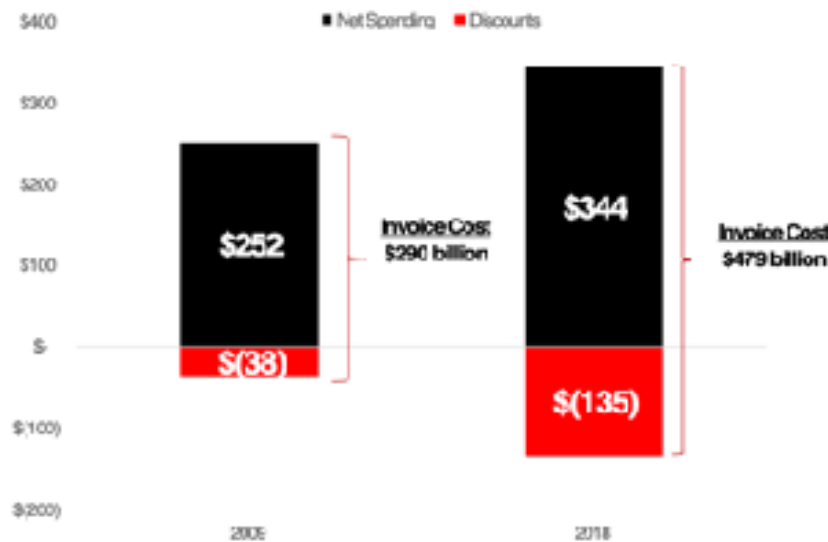
One problem is the practice of spread pricing. Spread pricing occurs when PBMs charge payers more than the amount they reimburse pharmacies, then pocket the difference as profits for the PBM. Spread pricing unjustifiably raises the cost of medicines and increases revenues for PBMs without increasing the quality of services for pharmacies or plan sponsors (such as the State of New Hampshire). More effective contracting processes can save money by prohibiting the practice of spread pricing.

The cost of medicines for patients are also higher because of an inefficiency known as the gross-to-net bubble. Figure 1 demonstrates the size of the gross-to-net bubble using the drug spending data as reported by data analysis company IQVIA. Figure 1 shows that the gross cost of medicines grew 5.7 percent annually from \$290 billion in 2009 to \$479 billion in 2018. However, this was not the cost to the health care system. Instead, the net cost of medicines (the actual cost of the medicine to the system) grew a much slower 3.5 percent annually (from

\$252 billion in 2009 to \$344 billion in 2018). The difference between the two are the discounts negotiated by PBMs, which have been growing 15.1 percent annually over this time frame.

In this arrangement, PBMs encourage excessive growth in gross drug prices, which allows them to create larger discounts, which increases their compensation. On net, it is questionable whether this arrangement is actually controlling costs. Even more problematic, the co-insurance costs for patients are often tied to the artificially growing gross prices. State employees are paying more for their medicines than necessary due to these inefficiencies. Again, a more effective contracting process can minimize these incentives and improve the price transparency for employees and retirees while also saving them money.

Figure 1
Gross Costs, Discounts and Net Spending for Medicines
2009 and 2018



Source: IQVIA

Another key problem is the difficulty of effectively comparing competing bids when trying to decide between PBM service providers. In the traditional contracting process (where the state issues an RFP), the bidding PBM will set the terms of the services, such as which drugs appear on which formulary tier. Since each PBM will set different parameters, it is difficult for the state to effectively compare the cost and quality of the services provided across the different proposals.

Alternatively, if the state controls the design of the formulary using an automated reverse auction process, then each proposal can be compared on an apples-to-apples basis. Plus, putting the state in control over the benefit design is consistent with how New Hampshire

purchases most other goods and services. State officials define the parameters of the goods and services they want to receive, and then suppliers compete to provide the desired products.

Reverse Auctions Have Been Shown to Reduce Costs and Improve Services

As the National Academy for State Health Policy (NASHP) noted, “using a reverse auction methodology can help a state secure the most favorable PBM terms. A reverse auction allows bidders to see certain quantitative and qualitative terms of other bids, and implementing successive rounds of bidding may substantially improve the terms of the final bids.”² A growing number of case studies support the NASHP position that reverse auctions can save large organizations (such as the state of New Hampshire) money when they purchase goods and services.

In a two-part series that overviewed the reverse auction concept, David Wyld (2011) noted that “the procurement and supply chain management literature is replete with case studies and stories documenting how leading companies have effectively used reverse auctions”.³ Citing some of the evidence that reverse auctions improve outcomes, he states that the

"hard dollar acquisition cost savings are but part of the equation. Indeed, a recent report from the University of Arkansas' Information Technology Research Institute has shown that by using reverse auctions, not only do companies save 15 percent on their acquisitions of goods and services, but additionally, procurement cycle times can be decreased by 90 percent. And now, we can see that many of the benefits of adopting reverse auctions were established by the private sector and were then confirmed by the experiences of states and government agencies."⁴

Ultimately, Wyld notes that “the generally accepted figures are that reverse auctions can produce savings of between 10-40 percent, with some first-time reverse auction savings consistently being reported at 20 percent.”⁵

The Institute for Supply Management has also linked the benefits from using a reverse auction to more than price reductions. Wes Guillemaud and Ted Farris (2003) have documented that a reverse auction generates an average savings between 12 percent and 24 percent in addition to an overall improvement in the supply chain management and enables the organization to shorten its purchase and fulfillment cycle times.⁶

A 2018 Government Accountability Office (GAO) review of reverse auctions found “that auctions with iterative bidding resulted in award prices that were, on average, about 12 percent

lower than pre-auction cost estimates, which generally reflect the government's independent cost estimate."⁷ Importantly, the GAO found that without the iterative process, the cost reductions were only 6 percent lower.⁸ These results demonstrate the importance of incorporating iterative bidding into the auction's structure.

Perhaps most relevant for New Hampshire is New Jersey's experience using a reverse auction to award its PBM services effective beginning in 2018. Summarizing the results, Joseph Burns (2019) noted that

“in June 2017, three PBMs submitted opening bids in New Jersey's reverse auction for pharmacy benefits: CVS Caremark, Express Scripts (which had the contract until the end of the year), and OptumRx. After analyzing the complex components of each proposal in the first round, state officials reported the lowest bid to the PBMs and asked each one to submit still lower bids in a second round.

From this process, New Jersey awarded the PBM contract to OptumRx, agreeing to pay the unit of UnitedHealth Group \$6.7 billion over three years. In September 2018, Gov. Phil Murphy, a Democrat, said in a press release that the reverse auction helped cut pharmacy costs for state and local governments by over 25%. School employee members saw their premiums drop this year by 1.1%, versus an increase of 13% in 2018, according to Murphy's press release.⁹”

In testimony to the New Hampshire Senate Commerce Committee, Dudley Burdge, the Commissioner of the New Jersey State Health Benefits Commission, said,

“Total savings to our State for the total 5-year period under PBM contracts awarded through our two reverse auction processes are projected at \$2.5 billion an average annual reduction in prescription drug spending of \$500 million per year. As we enter the third plan year (on January 1, 2020) since adopting the PBM reverse auction process, I am pleased to report that we are on track to meeting our 5-year, \$2.5 billion drug savings projection.”¹⁰

Conducting an online reverse auction to reward the state's PBM contract can generate significant savings, but there is an important caveat. New Hampshire must take the time to structure the reverse auction properly. For example, as the GAO's analysis emphasized, it is imperative that the reverse auction contain iterative rounds of bidding in order to reach the savings potential. It is also necessary for New Hampshire to have a detailed understanding of

the PBM pricing environment in order to ensure that the reverse auction actually improves the transparency of the drug pricing market.

New Hampshire officials would need to understand the variations of the Average Wholesale Price (AWP) that PBMs will sometimes use to increase their revenues, the use and misuse of maximum allowable cost (MAC) lists, the requirements that patients use the PBMs-owned mail order services, and the practice of relabeling discounts and rebates as fees in order to perpetuate the current opaque pricing system.

Other important details that must be managed include ensuring that the bidding requirements are clear, the technology platform used to conduct the reverse auction is capable, effective, independent of PBM ownership or influence, and the goals from using the reverse auction are clearly defined (e.g. is the lowest-priced compliant bid the only consideration?).¹¹ Ultimately, a reverse auction will have the greatest impact if the bidding mechanism is used as a means to reform how the PBM functions to better serve the state.

Potential Savings for New Hampshire

Given the extensive experience of private organizations, the federal government, and other states to generate savings through the use of an online reverse auction, it is reasonable to assume that New Hampshire will save money by adopting an online reverse auction for awarding its PBM services contract.

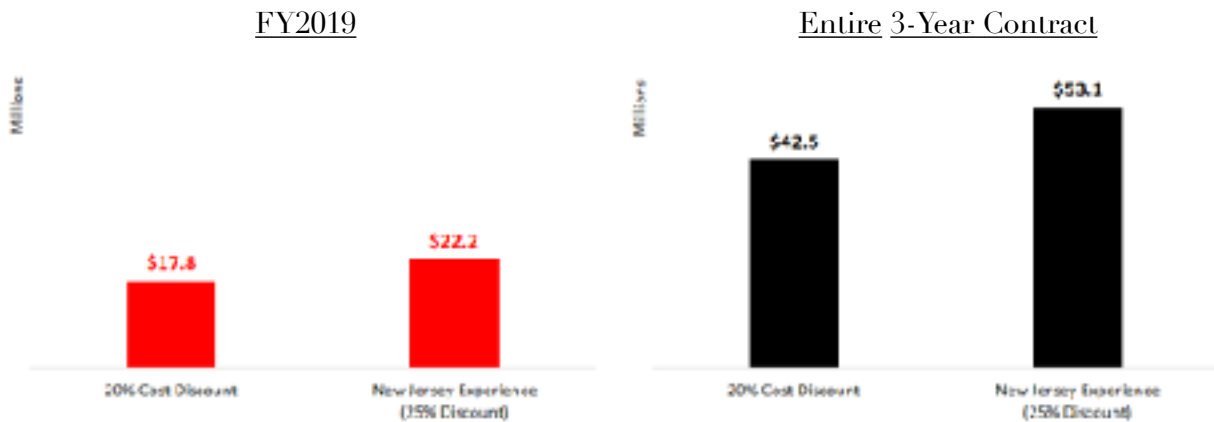
Based on New Hampshire's Fiscal Year 2019 Comprehensive Annual Financial Report (CAFR), total prescription drug spending for employees and retirees was \$88.9 million.¹² For the 36-month period effective January 1, 2019 through December 31, 2021, \$212.5 million in total prescription drug costs have been authorized.¹³ Based on this expenditure level, New Hampshire can expect to reduce its prescription drug costs by millions of dollars by implementing a well-designed reverse auction.

The precise savings will depend upon how the auction is conducted and the unique attributes of New Hampshire. Based on the average first-time savings reported by Wyld, New Hampshire could expect costs to be reduced by 20 percent. Based on New Jersey's experience conducting a reverse auction for PBM services, New Hampshire could expect a 25 percent reduction in costs.

Using the New Jersey experience as the high-end savings potential, for conservative purposes, and a 20 percent savings as a low-end savings potential, New Hampshire's adoption of an online reverse auction could reduce FY 2019 drug costs by between \$17.8 million and \$22.2 million (20 percent and 25 percent of \$88.9 million, respectively). Over the entire 3-year contract, a reverse auction could generate between \$42.5 million and \$53.1 million in savings

(20 percent and 25 percent of \$212.5 million, respectively). Obviously, if the 40 percent reduction in costs were achieved, then the state's savings potential would be even greater. ¹⁴

Figure 2
Expected Drug Cost Savings from Conducting An Online Reverse Auction
FY2019 and Current 3-Year Contract Period (in millions)



Conclusion

New Hampshire can meaningfully reduce its expenditures on prescription drugs by employing an online reverse auction to award the state's PBM services contract. This purchasing structure has been used successfully to improve the cost and quality of services by public and private-sector organizations. The state can expect to save an estimated \$17.8 million – \$22.2 million annually on prescription drugs, based on the state's existing PBM contract, with a total savings of between \$42.5 million and \$53.1 million over three years. With state revenues falling and a huge budget gap already materializing, the savings from a well-designed reverse auction are important to realize as soon as possible.

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¹ Vasquez J and Lohr G (2019) “Pharmacy benefit managers, explained” *Advisory Board* November 13; <https://www.advisory.com/daily-briefing/2019/11/13/pbms>.

² Brown EF (2020) “NASHP Model Pharmacy Benefit Manager Contract Terms” *National Academy for State Health Policy* January 27.

³ Wyld DC (2011) “Current Research on Reverse Auctions: Part I – Understanding the Nature of Reverse Auctions and the Price and Process Savings Associated with Competitive Bidding” *International Journal of Managing Value and Supply Chains* Vol. 2 NO. 3, September.

⁴ Ibid.

⁵ Ibid. Truveris, a company that provides on-line reverse Auction services also confirms the average 20 percent savings potential from conducting a reverse auction; see: www.truveris.com.

⁶ Guillemaud W and Farris T (2003) “Lowering Total Cost Through Reverse-Auctions” *Institute for Supply Management Conference Proceedings*.

⁷ (2018) “Reverse Auctions: Additional Guidance Could Help Increase Benefits and Reduce Fees” *Government Accountability Office* July GAO-18-446.

⁸ Ibid.

⁹ Burns J (2019) “In New Jersey, a race to the bottom that saves a billion” *Managed Care* July 5; <https://www.managedcaremag.com/archives/2019/7/new-jersey-race-bottom-saves-billion>.

¹⁰ Burdge D (2020) *Testimony of Dudley Burdge to the New Hampshire Senate Commerce Committee*, January 28.

¹¹ Another potential benefit from the online reverse auction is the ability for New Hampshire to repurpose the same technology platform that was used to conduct the online reverse auction to adjudicate PBM prescription drug claims and identify any deviations from the state contract within hours of receipt. In testimony to the N.H. Senate Commerce Committee, New Jersey State Health Benefits Plan Commissioner Dudley Burdge reported that such real time adjudication of PBM claims invoices enabled the State of New Jersey, over two years, to “to identify and recover an additional \$46 million in prescription claims overcharges by the incumbent PBM who won award of contract through the reverse auction.”

¹² “State of New Hampshire Comprehensive Annual Financial Report: For the Fiscal Year Ended June 30, 2019” *Department of Administrative Services*.

¹³ “Purchasing Order Notice of Contract” *Department of Administrative Services*, July 31, 2018; https://das.nh.gov/purchasing/Docs/Notices_of_Contract/8002472%20Prescription%20Drug%20Benefit.pdf.

¹⁴ The average savings experienced by organizations/state governments that employed a reverse auction were used to estimate the potential savings for New Hampshire. As documented in the report, organizations have experienced a range of savings that has varied between 10% and 40%. Obviously, if using a reverse auction reduced costs by either 10% or 40%, New Hampshire's savings would fall short of or exceed the savings estimated here based on the central estimates. However, the literature supports the outcome that New Hampshire is more likely to experience savings in the 20% to 25% range by switching to a well-designed reverse auction..