Update: Effect of state prescription drug affordability boards (PDABs) and upper payment limits (UPLs) on the drug pricing ecosystem

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Executive summary

Since 2019, several state prescription drug affordability boards (PDABs) have taken steps toward establishing upper payment limits (UPLs) on prescription drugs. We outlined the issues with UPLs in a 2024 paper titled "Influence of Prescription Drug Affordability Boards and Upper Payment Limits on the State Drug Pricing Ecosystem" (2024 Paper). This new paper aims to update our original analysis in light of recent state developments and provide stakeholders with considerations RR for evaluating the utility and feasibility of UPL implementation.

In the 2024 Paper, we concluded that UPLs will not help states achieve their intended goals of reduced patient out-of-pocket (OOP) costs and lower state drug spend and could create unintended negative consequences, such as reduced access, larger patient out-of-pocket burden and reduced reimbursement for providers.

However, since our initial research was conducted, several PDABs continue to pursue UPLs, despite facing significant implementation challenges, including the inability to establish what "affordability" means; difficulty in defining who benefits; using inconsistent methodology and not incorporating the complexities of the supply chain into the process.

The previously analyzed downstream concerns combined with the difficulty of implementation and continued costs to the state should cause stakeholders to question the further pursuit of UPLs as an effective policy solution. This new paper offers an analysis of recent state activity. It builds upon our initial findings that UPLs are likely to result in unintended consequences and implementation challenges throughout the healthcare ecosystem, ultimately resulting in reduced access and increased costs for patients.

UPL background

Concerned over the cost of healthcare, state legislators over the last decade have passed laws designed to curb government prescription drug spending, improve patient accessibility and affordability and increase transparency, even though drug spend was approximately only 9% of total national healthcare expenditures in 2023.[1, 2] Some state legislatures have established PDABs as the mechanism to conduct drug affordability reviews on specific products. Maryland created the first state PDAB in 2019 by following National Academy for State Health Policy (NASHP) guidance.[3] Since then, Colorado, Maine, Minnesota, New Jersey, New Hampshire, Oregon and Washington have created PDABs or similar entities to conduct drug affordability reviews.[4] However, as of July 1, 2025, the New Hampshire PDAB has been dissolved.[5] Other states have created bodies to study drug costs but have different mandates; for example, Vermont's Green Mountain Care Board has the option to conduct an affordability review of a set of drugs, but it is not required.[6]

UPLs are a policy mechanism that some PDABs are pursuing: UPLs are designed to cap the price that payers and purchasers pay for prescription drugs in the state, with the theory that doing so will lower patients' OOP costs.[7] However, UPLs do not and cannot cap the manufacturer's price, which means payers and purchasers may be unable to pay the price of the drug. Additionally, UPL-setting does not address the role of pharmacy benefit managers (PBMs) and insurers in setting OOP costs for patients, nor does it incorporate the value of the treatments on health outcomes or the healthcare system.[8] Four PDAB states—Washington, Colorado, Minnesota and Maryland—have UPL authority.[3]

Current state of UPL implementation

Since our first UPL analysis, several states have moved forward with affordability reviews and UPL development. However, these initiatives have yielded little progress while incurring significant costs to the states.

For instance, Minnesota has appropriated over $1 million to the PDAB since it was enacted, before beginning reviews.[9] Similarly, the Colorado PDAB is estimated to have received nearly $2 million from state taxpayers while Maryland's PDAB has cost taxpayers an estimated $4.12 million over the first five years of its existence.[10, 11] Despite these ongoing costs, no PDAB has yet implemented a policy that reduces costs for patients. In fact, recognizing the growing expense to the state to administer a PDAB without corresponding cost savings, New Hampshire enacted legislation in 2025 to dissolve its PDAB.[12]

Part of the reason for the slow progression has been due to policy challenges and stakeholder concerns, such as:

- PDAB Board members and stakeholders have not been able to align on the definition of "affordability" and who this concept is intended to serve—the state, patients or taxpayers.[13]
- While PDAB statutes outline eligibility criteria for drug selection, affordability review and UPL setting, PDABs have adjusted their methodologies mid-process, and in some cases acknowledged that data are incomplete, erroneous and/or outdated.[14]
- Methodologies vary significantly across states and are often inconsistently applied.[15]
- Selection criteria for review are based on year-over-year price increases or wholesale acquisition cost (WAC) exceeding a defined threshold, which does not account for the impact of rebates on net price or the influence of insurance design on cost-sharing.[3]

As of July 2025, the following states were in various stages of conducting affordability reviews and/or UPL setting.

Colorado

As of July 2025, Colorado is the furthest along in potentially setting the first UPL. In 2024, the PDAB conducted affordability reviews on five drugs and deemed three drugs "unaffordable." In December 2024, the PDAB presented its UPL setting methodology, which includes but is not limited to the prescription drug's costs (e.g., administration and dispensing costs) and the drug's status on the Food and Drug Administration's (FDA) drug shortage list.[16]

A challenge Colorado has faced—and which is a concern with all UPL setting—is data validity. During the PDAB meeting on April 11, 2025, the Board disclosed that the All-Payer Claims Database (APCD) data used to determine drug eligibility and conduct affordability reviews was misclassified. One PBM had incorrectly labeled commercial data as Medicare data and vice versa, which impacted 6.9% of all pharmacy claims, meaning that the eligibility determinations and affordability assessments for all three drugs were based on flawed data.[17]

In addition, the Board presented validated data spanning from 2019 to 2022 that showed substantial decreases in total payer spend for the three drugs.[17] The Board has also declined recommendations and assistance from its Prescription Drug Affordability Advisory Council (PDAAC) members, including on developing tools to aid in UPL analyses and decision-making.[18] Additionally, the Board's cost-benefit analysis (CBA) of Enbrel did not adhere to academically accepted CBA protocol, as there was no assessment of direct or indirect costs nor establishment of health outcomes. The authors even admitted that they could not model the impact and, therefore, they assumed minimal effect contrary to the concerns raised by various stakeholders: "While there may be actual costs to the drug supply chain associated with the implementation of a UPL, those costs are unknown and are unlikely to be substantial."[19] Despite these issues, PDAB staff announced their intention to proceed with the UPL rulemaking process for the three selected drugs.[20]

Oregon

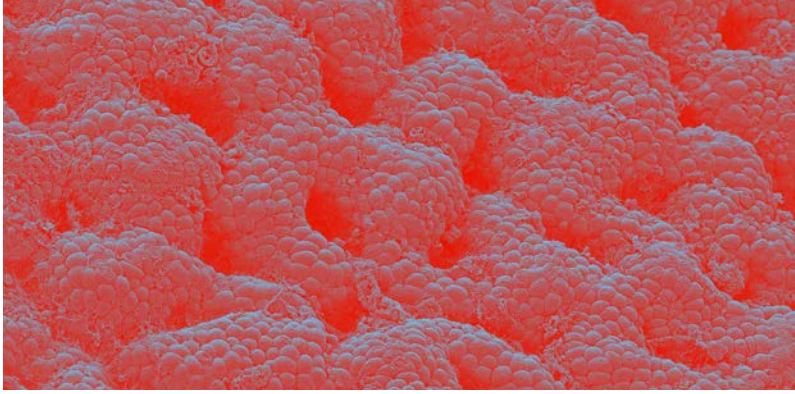
Established in 2021, the Oregon PDAB is required to review and select drugs that may create affordability challenges for health systems or patients. In 2023, the Board initiated its affordability review process; however, the Board faced significant stakeholder concerns about the lack of clarity in defining or assessing affordability.[18, 21] As a result, the Board paused proceedings in June 2024, announcing its intent to reassess its drug eligibility criteria, affordability definitions and methodology, and it then reset its list of drugs the following year.[22] In March 2025, the Board voted on a new "subset list."[23] Despite restarting the process, the Board has not communicated if or how it revised its criteria and methodologies to address previously identified issues.[24]

While the Board currently lacks UPL-setting authority, the state enacted a law in 2023 mandating the Board submit a report with recommendations for how it could establish a UPL.[25] In preparing that report, the Board held multiple roundtable discussions and hearings with constituent groups (340B covered entities, carriers, hospitals, patient advocacy groups, manufacturers, PBMs and retail pharmacies). Each of the cohorts—including PBMs—identified significant concerns with a UPL, including potential for decreased patient access and increased costs for patients, providers and pharmacists.[26]

Notably, the report highlighted that a UPL could ultimately increase costs for Oregon's healthcare system due to lost rebates. For example, according to the report, the Oregon Educators' Benefits Board and Public Employees' Benefits Board plans could see "a combined increase of $12.1 million in plan spend" under a UPL. The report also did not suggest that patient OOP costs would decrease. To the contrary, the report asserted that reimbursement for UPL drugs may be too low for pharmacies, causing pharmacies to limit access or shift costs, resulting in restricted availability or plan design changes.[25]

As a result of these findings, some Board members expressed concern with UPLs, while others wanted to limit the contents of the report to focus solely on UPLs. Those with concerns wanted to include a section titled "additional cost savings and complementary approaches to UPL," arguing that it was important for legislators to understand that approaches other than UPL-setting exist to lower drug costs. After a series of tied votes, the Board ultimately decided to leave the section in its report but removed it from the report's executive summary.[27]

While the Oregon PDAB continues to pursue affordability reviews, the Oregon legislature indicated in early 2025 that they may not reintroduce a bill to give the Board UPL authority until 2027. Legislators cited the Board's "clear lack of agreement" in support of UPLs as reasoning to refrain from introducing a bill.[28]



Maryland

As of July 2025, the Board is collecting data on four to six drugs and began its Cost Review on one. If the Board determines that a drug may create an affordability challenge, it must identify the underlying reasons, acknowledging that unaffordability may not be solely attributed to the manufacturer's price. Following this assessment, the Board can decide to set a UPL and/or recommend an alternative policy solution.

Maryland's UPL Action Plan outlines criteria for setting UPLs, including 1) prioritizing drugs with high OOP expenses relative to their net costs, 2) excluding drugs with minimal use by affected government entities and 3) ensuring that UPLs do not lead to unintended negative consequences.[29] Maryland has also updated its definition of UPL to include a "system net ingredient cost," which combines patient OOP costs with amounts paid by payers.[30] In May 2025, Maryland enacted a bill that expands the Board's authority to set UPLs for commercial plans and added a requirement to evaluate the impact of UPLs on patient access and affordability.[31] Going forward, the PDAB will establish UPLs through a traditional notice-and-comment rulemaking process. Once UPLs are set, the Board will monitor the availability of the affected drugs and can reconsider or repeal a UPL.

Minnesota

Minnesota's PDAB, established on January 1, 2024, has not yet selected drugs for affordability review. If the PDAB determines a drug creates an affordability challenge for the state health care system or for patients, the Board is required to set a UPL.[32] In determining the UPL, the PDAB must consider factors such as a range of prices at which the drug is sold in the U.S. as well as the range at which pharmacies are reimbursed in Canada. If the drug is subject to a Medicare "Maximum Fair Price" ("MFP") under the Inflation Reduction Act (IRA), then the PDAB is required to set the UPL at the "MFP."[33] Using the "MFP" as a reference price also poses risks, as "MFP" reimbursement rates may not adequately cover acquisition costs, particularly for physician-administered drugs, which could ultimately increase healthcare costs and reduce drug availability.[34] Additionally, independent pharmacies have raised concerns about being able to provide products at "MFP" prices.[35]

Unintended consequences of UPLs

UPLs are unlikely to improve patient affordability, mostly due to the unintended consequences they are likely to create across the supply chain and the subsequent risks posed to patient access.

Impact on patients

UPLs have been touted as a way to lower patient OOP costs, based on the theory that lowering payment rates for drugs will allow payers to "pass through" savings to patients. However, as of July 2025, only Colorado and Washington require resulting savings to be passed onto patients, though the implementation of their requirements is yet to be seen.[36, 37]

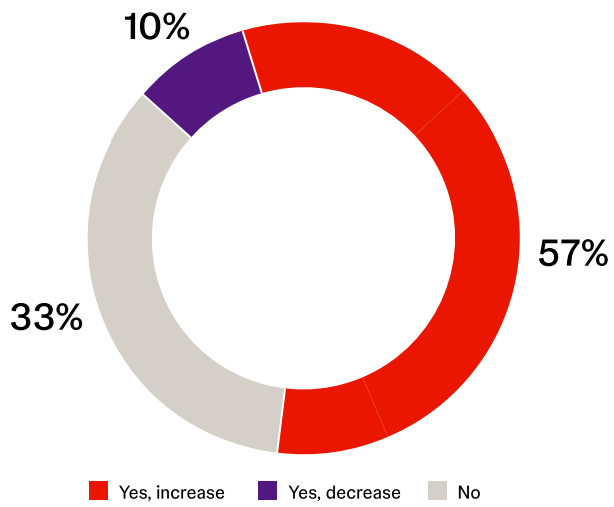
The key problem with UPL setting is that it ignores overall plan economics and current market-based access incentives. Even if gross costs are lower for a UPL product, plans often base coverage decisions on the value of rebates and net costs to the plan.[38] A UPL could upend that dynamic and lead payers and plans to favor non-UPL drugs over UPL drugs in the following ways:

- If a UPL reduces rebates on a specific treatment, payers could limit patient access by implementing utilization management (UM) restrictions such as prior authorization or step therapy on UPL-affected drugs and/or their therapeutic alternatives to direct patients to other options.[39]
- Payers could also shift UPL-affected drugs or other products in the same class to higher cost sharing tiers. This may lead to higher patient OOP costs and could also result in patients taking therapies different from what their doctor thought was the best option for them.[39]

Payers have also expressed concern that the administrative burdens related to UPL implementation would raise their own costs. In addition, some payers have stated that their organization would not absorb any loss in profit due to UPLs.[40]

Payers have confirmed they are considering these actions if UPLs are implemented. In research from Avalere Health and the Partnership to Fight Chronic Disease, when asked about the potential for these benefit design changes, all interviewees agreed that UPL-affected drugs or their competitors in the therapeutic class could see greater UM, depending on how manufacturers respond to supply chain changes, rebating and UPL implementation. In addition, five of six interviewees indicated that they expect formulary adjustments, such as moving selected drugs and therapeutic alternatives to different tiers.[39] And 57% of surveyed health plans anticipate increasing premiums due to UPL implementation (Chart 1).[40]

Chart 1. If a UPL is implemented in a state where this plan does business, do you anticipate changing premiums for enrollees?



State-level price controls like UPLs may also lead to significant shifts in the out-of-state drug market. By placing UPLs on drugs in certain states, the market may become less predictable, resulting in shortages and access issues for patients.[41] Finally, UPLs could create an imbalance in patient access to prescription drugs across different insurance plans, possibly creating unequal access among state residents based on their insurance coverage.[41] Since PDABs are currently focused on state-regulated plans, with some states allowing Employee Retirement Income Security Act plans (i.e., self-funded employer plans) to opt-in, UPLs could create disparities between individuals enrolled in these plans.[42] This could exacerbate confusion and inequalities in medication access, particularly in states with significant populations enrolled in non-state-regulated plans.

Impact on pharmacies

An emerging issue that could be further exacerbated by UPLs is the financial pressure on pharmacies, particularly community pharmacies. While UPLs set a ceiling for pharmacy reimbursement, they do not establish a minimum threshold, creating the risk that pharmacies could be reimbursed below acquisition cost for certain drugs.[41] Notably, while the IRA includes provisions to ensure pharmacies are "made whole," PDABs do not have the authority to enforce this requirement, leaving pharmacies vulnerable to financial instability and access issues.[43]

The operational and administrative burdens on pharmacies could also increase as they navigate the complexities of UPL effectuation. Pharmacies may be required to ensure that UPLs are applied exclusively to state residents, adding layers of administrative work.[44] Moreover, since many contracts within the drug supply chain are national, state-imposed reimbursement limits could discourage wholesalers from purchasing UPL-affected drugs, resulting in pharmacies being unable to stock them.[41] Alternatively, pharmacies might be forced to dispense drugs at a loss, further impacting their operational expenses and threatening financial viability.[41]

All of this can impact patient access in two ways:

1. Pharmacies may choose not to stock UPL drugs due to reimbursement levels below acquisition costs.[45]
2. The overall financial pressures could exacerbate the growing issue of pharmacy deserts: As pharmacies close due to financial issues, more geographical areas have limited access to pharmacies and patients must travel long distances to fill prescriptions.[46]

Longer-term impacts

Patient assistance: As payers and PBMs adapt benefit designs due to UPLs (e.g., increasing coinsurance or re-tiering drugs), patients may encounter higher OOP costs.[47] This could lead manufacturers to expand or modify copay assistance and patient assistance programs to maintain access, particularly for vulnerable populations.[48] However, the increasing prevalence of patient assistance diversion programs, such as accumulators and maximizers, may offset the effectiveness of these manufacturer-sponsored supports, maintaining financial burden on patients and potentially altering how companies structure their assistance offerings.[48] Of note, only 4 of the 8 states with PDABs have a ban on copay accumulators in place.[49]

Value-based contracts (VBCs): VBCs are reimbursement agreements between healthcare payers and pharmaceutical manufacturers that tie price, amount or type of reimbursement to value-based outcomes, with the purpose of incentivizing the delivery of high-quality, cost-effective care.[50] State-imposed price limits may significantly alter the landscape for VBCs. With revenue ceilings in place, the financial upside tied to performance-based pricing is diminished, making these contracts less attractive. This could upend a promising contracting option that is intended to incentivize the delivery of quality care. The inherent risk of VBCs becomes more pronounced under rigid price structures, particularly when manufacturers face penalties for underperformance but lack the flexibility to adjust pricing accordingly.[51]

Manufacturer innovation: As manufacturers evaluate which therapeutic areas are at higher risk of state-imposed price controls, they may recalibrate research and development priorities accordingly.[52, 53] Concerns about recovering investments are especially acute in markets where biosimilar competition is intensifying or where small molecule drug development is already under pressure. The inability to achieve sufficient return on investment under price-constrained conditions may stall the pace of new therapy introductions and undermine competitive dynamics in certain therapeutic classes.[53]

Conclusion

As explained in our original publication and reinforced here, UPLs focus solely on the price of the drug and ignore the interconnected market realities of the drug pricing ecosystem and supply chain. Therefore, they are likely to have a negative impact on patient access and OOP costs.

In addition, PDABs continue to advance affordability reviews and pursue UPLs, despite the ongoing stakeholder concerns about the processes and methodologies used and the negative downstream effects. States that are implementing or are considering UPLs should carefully weigh immediate and long-term consequences before further action, as these unintended consequences may exacerbate existing patient access barriers without delivering OOP cost relief and, to date, creating little to no savings for the state or patients.

Instead of pursuing UPLs, policymakers should consider strategies that directly address patient OOP costs while preserving access to clinically appropriate treatments, such as requiring PBM rebates and discounts to be passed directly to patients at the point of sale; re-evaluating and regulating the use of utilization management in the interest of appropriate patient access; and prohibiting diversion mechanisms like copay accumulator and maximizer programs.

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