Insight

Poor Incentives in the Prescription Drug Market: An Anticoagulant Case Study

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Executive Summary

- Both the United States and the United Kingdom (UK) have established price-control regulations that apply to the most widely used medications – specifically, those medications with the overall highest spending, rather than those with the highest spending per beneficiary – including anticoagulants used to prevent stroke and stroke-related events.
- The Centers for Medicare and Medicaid Services continues to negotiate a maximum fair price for the top 10 most used drugs in Medicare effective 2026 with additional products phased-in over the coming years, while the UK's voluntary drug pricing scheme will require double-digit rebates from manufacturers and set a low rate of allowable growth in overall market sales until 2029.
- The pricing schemes in both countries do not seem to recognize the value these drugs provide to the health care system in terms of their long-term budgetary savings from reduced hospitalizations; indeed, these price-control schemes come with potential long-run costs that would reduce utilization, thereby increasing hospitalization costs.
- Notably, the United States and UK demonstrate similar rates of anticoagulant use, face similar costs for inpatient stroke care, and have a similar percentage of people over 65, making a comparative case study useful.

Introduction

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The Centers for Medicare and Medicaid Services (CMS) continues to negotiate a maximum fair price for the top 10 most used drugs in Medicare effective 2026 with additional products phased-in over the coming years, while the UK's voluntary drug pricing scheme will require double-digit rebates from manufacturers and set a low percentage of allowable growth in overall market sales until 2029. Low-growth caps would continue under the statutory scheme if a new voluntary scheme was not created for 2030.[i]

Notably, the United States and UK demonstrate similar rates of anticoagulant use, face similar costs for inpatient stroke care, and have a similar percentage of people over 65, making a comparative case study useful. For the first round of drug negotiations, CMS selected two drugs with a similar purpose, Eliquis and Xarelto. Yet Eliquis may be a safer and more effective medication than Xarelto.[ii] Thus, this insight examines the potential impact of U.S. and UK price setting regulations through a case study of Eliquis – the most prescribed

drug in Medicare and the most widely prescribed oral anticoagulant in the UK's primary care – to demonstrate the negative impacts of drug price control schemes that favor short-term government savings over long-term benefits to both patients and governments.

Eliquis, also known as apixaban, is a direct oral anticoagulant (DOAC). Anticoagulants are more frequently prescribed for the elderly population. There is clinical evidence that DOACs are safer and more effective than older products such as warfarin. Both the United States and the UK have a similar percentage of elderly individuals as well as similar prevalence of atrial fibrillation in the population.

The Lancet Neurology recently published a study finding that neurological conditions are the "leading cause of overall disease burden in the world," affecting 43 percent of the global population and that "strokes accounted for the largest disability-adjusted life years at 160 million in 2021," demonstrating just how important these drugs are to global health care. By exploring the use of DOACs in both the United States and the UK, policymakers can contextualize the clinical benefits as well as the financial costs for government payers to cover strokes as well as subsequent episodes of care for stroke patients.

In light of these dynamics, both countries are setting new regulations and requirements that are likely to disincentivize manufacturers from developing future DOACs or other widely used medicines for fear of financial risks associated with government price setting (in the form of the Medicare Drug Price Negotiation Program which was included in the Inflation Reduction Act, or the IRA) or penalties associated with patient overutilization (in the form of the Voluntary Scheme for Branded Medicines Pricing, Access and Growth, or VPAG).

While the UK acknowledges long-term budgetary savings from reduced hospitalizations associated with these drugs, the pricing schemes in both countries view cost savings from a narrow perspective, not considering the potential long-run costs of policies that would reduce utilization in a population that benefits from the use of oral anticoagulant medication.

Regulatory Background: Price Impacts and Cost Settings

Inflation Reduction Act

As part of the implementation of the IRA, CMS recently announced that all pharmaceutical drug manufacturers forced to participate in direct negotiations for the top 10 most used drugs in Medicare Part D have submitted counteroffers to the agency's initial maximum fair price (MFP) offers. Manufacturers had until March 2, 2024, to accept CMS' first MFP offer or propose a counteroffer, and negotiations are expected to continue for several months.

The IRA changes manufacturer rebate calculations in two significant ways. The first is that the top 10 drugs most utilized by Medicare patients will be subject to direct negotiations to establish an MFP, where the ceiling could be set between 25 percent and 60 percent, from a drug's previous non-federal average manufacturer price (non-FAMP). The second is the setting of inflationary rebates in Medicare Part D for any drug that costs more than $100 per year per beneficiary. This will capture almost all drugs. For non-MFP products, manufacturers may reduce their rebate offerings in Part D to offset their financial risk of future inflationary penalties. Eventually Medicare Part B products will be subject to an MFP, as they are subject to inflationary rebates as of January 2023. (For a deeper dive into IRA inflationary penalties, see here.)[iii]

2024 Voluntary Scheme for Branded Medicines Pricing, Access, and Growth

The UK completed a lengthy negotiation between government and industry on the next iteration of its? Voluntary Scheme for Branded Medicines Pricing and Access (VPAS), now known as VPAG.

Following the double-digit rebates set in 2022 (15 percent) and 2023 (26.5 percent), manufacturers will be required to pay a lower amount of 19.5 percent for the transition period from VPAS to VPAG for the first quarter of 2024. The new scheme will not have all members paying a fixed rate; rather each manufacturer will pay rebates based on product age, with some older products facing a total rebate of 35 percent, an amount significantly larger than those of other European nations. For example, Germany has a general mandatory discount set at 7 percent for all medicines. VPAG was negotiated between the Department of Health and Social Care (on behalf of England, Northern Ireland, Scotland, and Wales),?National Health Service?(NHS), and the Association of the British Pharmaceutical Industry. Drug manufacturers already must sell their products at a competitive price to secure regulatory approval by the National Institute for Health and Care Excellence and inclusion on the?British National Formulary.

VPAG does permit manufacturers an overall market growth rate (2 percent in 2024, 3.75 percent in 2025 and 2026, and 4 percent in 2027 and 2028). As one study summarized, "Any NHS spending above the agreed percentage will have to be paid back to the government by members of the scheme." Unlike in the United States, where volume-based discounts for branded medicines can increase savings for payers, VPAG sets an overall market growth rate to protect against sudden unexpected changes in spending based on spikes in patient utilization. In April 2022, the Eliquis patent was challenged and exclusivity was lost. Subsequently, generics have entered the market but the usage of (brand and generic) apixaban remains high.

To best understand how drugs are priced in the UK, it is important to understand that the UK has two drug pricing schemes: a voluntary program, in which most manufacturers participate, and a statutory program. Traditionally, drug manufacturers joined the voluntary scheme as it allowed drug manufacturers more flexibility and better contracted terms than the traditional statutory scheme. There is some speculation that manufacturers may have until the end of the first quarter of 2024 to determine which drug pricing scheme to follow or else abandon the UK market.

Eliquis Case Study

Demographic Comparison of the Over-65 Population

From the 2020 U.S. Census, approximately 55.8 million people, or about 17 percent of the total population, were 65 and over.[iv] From the most recent UK census in 2021, the England and Wales had over 11 million people – 18.6 percent of the total population – aged 65 years or older. [v]

Trends in Clinical Use for Atrial Fibrillation

According to a study that compared Medicare Part D Prescription Drug Event data and the UK Open Source Dataset, both countries prefer prescribing Eliquis over older anticoagulants such as warfarin. The study highlights that neither the United States nor the UK has specific clinical guidelines on preferring a DOAC. The authors conclude that clinicians may favor DOACs over other coagulants due to existing observational data or other factors, such as price, insurance formularies, and/or patient preferences. In 2023, the American Geriatrics Society recommended preferring apixaban over rivaroxaban for the long-term treatment of venous

thromboembolism and nonvalvular atrial fibrillation (AF)[vi] as rivaroxaban appears to have a "higher risk of major bleeding and GI [gastrointestinal] bleeding in older adults than other DOACs, particularly apixaban."

According to another study, "Of [Medicare] beneficiaries who used oral anticoagulants, the proportion using DOACs increased from 7.4 percent in 2011 to 66.8 percent in 2019, with an increase in DOAC users from 0.20 million to 3.50 million and a decrease in warfarin users from 2.48 million to 1.74 million." It appears that a clinical preference for DOACs over warfarin is reflected within these prescribing trends.

In the UK, apixaban is the most widely prescribed oral anticoagulant in England's primary care system. Since the end of 2021, following a commercial deal between NHS England and manufacturers, 24 million DOAC prescriptions were written with NHS England, indicating that DOACs prevented approximately 17,000 strokes and 4,000 deaths. Furthermore, in January 2024, NHS England recommended DOACs for the treatment of AF.

In the UK, around 1.5 million people are living with AF. In the United States, approximately 2.7– 6.1 million people have AF. The prevalence of AF increases with age, affecting 1 in 10 adults over 80 in the United States.

Clinical Costs

Keeping elderly patients out of hospitals and stabilized on DOACs saves government money and reduces deaths from strokes. For example, one study found that DOACs reduced the risk of recurrent venous thromboembolism . Further research found that Medicare beneficiaries[vii] that did not take anticoagulant and "then suffer[ed] an ischemic stroke result[ed] in one-year Medicare Part A program spending of approximately $47,000 per person compared to an average spending of approximately $12,800 per beneficiary in the Medicare program in 2018." According to a 2016 study, "The mean lifetime cost of ischemic stroke is approximately $140,048 in the United States, placing stroke among the top 10 most costly conditions among Medicare beneficiaries."

While it's possible that DOACs may be overprescribed for some low-risk patients, the risks of stroke for both the patient and the payer are likely greater than the risks (for most) of not taking an anticoagulant medication.

Similarly in the UK, strokes are expensive. One study found that "the mean cost of new-onset stroke is £45,409…in the first year after stroke and £24,778…in subsequent years. Aggregate societal cost of stroke is £26 billion per year, including £8.6 billion for NHS and social care." Generally, in the United States and the UK, stroke deaths have declined in the elderly population due to new medications such as statins and DOACs.

Cost of Eliquis

While the UK doesn't disclose pricing for products approved by the National Institute for Health and Care Excellence, the annual list price for Eliquis per person (regardless of payer type) in the United States is $7,100 and in the UK is $760 (approx. £600) in 2024. It is important to note, however, that Eliquis is a highly rebated drug and the payer price is unlikely to reflect the list price.

Both the United States and NHS England require out-of-pocket patient cost-sharing for certain beneficiaries to obtain prescription drugs.[viii] According to the manufacturer of Eliquis, "on average, patients pay $51 per month, and 5 out of 10 patients pay $35 or less" in the United States.

U.S. Eliquis Cost Assessment for Medicare Spending

Under the IRA's projected MFP, Eliquis could be expected to range in price between $2,130 and $4,260. Yet Medicare Part D average annual total spending for Eliquis was $4,342 in 2022. Medicare Part D spending is a gross total amount that includes manufacturer paid portions via official Medicare discounts and doesn't reflect rebates between manufacturers and payer. It is possible that the patient cost sharing after the MFP price is set will be higher than before IRA implementation, defeating the stated intention of the law – to reduce out of pocket costs for seniors.

UK Eliquis Cost Assessment

According to the UK National Statistics Prescription Cost Analysis, apixaban was the most dispensed chemical substance by cost for a total of £430 million (approximately $540 million) for the 2022–2023 period (the UK tax year begins on April 6).

Conclusion

The United States and UK focus on price controls based on the most-used drugs may be short-sighted, prioritizing short-term savings over longer-term health care system savings. Modern DOACs (and indeed other classes of medications) may well prevent and cure illness while reducing burdens on government health care payers by decreasing hospitalizations or other adverse events. DOACs are one of many tools health care systems use to reduce hospitalizations, strokes, and death in the elderly. Moreover, penalizing drug makers based on patient utilization for medications that at least appear to be both cost-effective and clinically beneficial runs the risk of being pennywise and pound foolish.

While reducing drug costs is important, reducing overall health costs and increasing health care quality is at least as valuable, both for the government and the patient. The IRA and VPAG may be overlooking both the clinical benefits these products bring to patients as well as long term, holistic cost savings to government payers.

[i] During the VPAG renegotiation period, some experts had argued that the low overall market sales percentage would likely be exceeded by increased patient demand following delays in care due to the COVID-19 pandemic.

[ii] Please note that both Xarelto and Eliquis were selected for price setting in Medicare. The 10 drugs selected for the IRA in 2023 include: Apixaban (Eliquis®), Dapagliflozin (Farxiga®), Empagliflozin (Jardiance®), Etanercept (Enbrel®), Ibrutinib (Imbruvica®), Insulin aspart (Fiasp® and NovoLog®), Rivaroxaban (Xarelto®), Sacubitril/Valsartan (Entresto®), Sitagliptin (Januvia®) and Ustekinumab (Stelara®). The primary manufacturers of these 10 drugs are: AbbVie, Amgen, AstraZeneca, Boehringer Ingelheim, Bristol Myers Squibb, Janssen, Merck, Novartis and Novo Nordisk.

[iii] The United States has a complex multi-payer marketplace with government programs, employers, and commercial plans paying different amounts for the same drug based on rebate negotiations between the pharmacy benefit managers (PBMs) and the drug manufacturer. PBMs typically structure their drug formularies based on rebate agreements that increase the discounted amount based on the volume of prescriptions filled. The discounted amount is typically passed back to the health plan or plan sponsor, such as an employer. Under some plans, such as UnitedHealthcare's fully insured commercial group plans, the discounted amount is shared directly with the consumer when a manufacturer rebate is offered.

[iv] The Census Bureau estimated the U.S. population at approximately 333.2 million for mid-2022. About 3.5 million Part D beneficiaries filled a prescription for Eliquis in 2022.

[v] The population for England and Wales was estimated at approximately 60 million in mid-2022.

[vi] AF occurs when the heart's upper chambers beat chaotically and irregularly, according to the Mayo Clinic.

[vii] The Centers for Disease Control and Prevention (CDC) found that in 2021, 1 in 6 deaths from cardiovascular disease was due to a stroke and that stroke-related costs in the US came to nearly $56.5 billion between 2018 and 2019. In fact the CDC reported that the death rate from stroke was 242.7 per 100,000 for persons over 65. Although this number remains high, US stroke mortality rates have "substantially declined, more so for ischaemic than haemorrhagic strokes."

[viii] Institute for Government "Devolution and the NHS" 2020. According to the Institute "After devolution Scotland, Wales and Northern Ireland all abolished prescription charges, making England the only of the four nations in which patients pay for prescriptions. In 2018/19, £576 million was raised through the prescription charge, which accounts for 0.5% of the NHS England budget."