Statement before the Senate Committee on Finance
On Lower Health Care Costs for Americans: Understanding the Benefits of the Inflation Reduction Act

Risks to Clinical Development and Access to Medicines

In the Inflation Reduction Act Drug Provisions

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Introduction

Chairman Wyden, Ranking Member Crapo, and members of the committee thank you for the opportunity to share my perspective on the Inflation Reduction Act's (IRA) implications on medicines, costs and, by extension, on health and longevity.

I share the perspective of someone who has worked in and for biopharmaceutical companies for twenty-four years. Over this time, I have analyzed the effect of major changes in the law and regulation in the U.S. and in other countries on the investment in research and development (R&D) for medicines. I've also examined how law and regulation affect access to affordable medicines for people and governments. I have advised and participated in major decisions in biopharmaceutical companies related to investments in drug development and drug pricing. I bring those experiences to share with the committee. I cite my own research as well as the observations and analysis of others. My observations, inferences, and recommendations are my own and do not belong to any company or organization that I have worked for or advised.

It has been estimated that the IRA will have a relatively minor effect on biopharmaceutical companies' revenues.[1] Some biopharmaceutical company leaders have reassured investors that they can manage the impact, but that doesn't mean the policy is benign. The IRA is changing investment and pricing decisions away from medicines with high use by elderly and disabled people, those for rare diseases, and, in particular, "small molecules". In any business, when revenues decline, effort is shifted away from that activity, even if the long-term viability of some business remains.

Multiple biopharmaceutical companies have issued announcements of discontinued programs and investments related to the IRA. [2] In a large and diversified company portfolio, the impact of the IRA can possibly be managed by shifting focus. However, shifting focus is not possible for small biotechnology companies, where many first-in-class and other new drugs originate. When a small company has only one or few drugs in development, and the IRA may significantly reduce their drug candidate's anticipated value, they become much less promising to investors or other companies who put the capital into their clinical development programs. The value of small companies that develop drugs for conditions prevalent in older and disabled people becomes lower because of the IRA relative to other biotech companies or other industries where investors may also place their capital.

Science is expensive and full of failure. While funding from the federal government and academic institutions does enable early discovery and proof of concept, biopharmaceutical companies are the primary funders in the large and expensive trials that lead to the approval of a new drug or vaccine or to establish a new use for an existing medicine. There is an essential and symbiotic relationship between the public and private sectors in drug development. The significant private investment in the high-cost trials that lead to drug approval depends on the anticipated financial reward for deploying capital in this high-risk endeavor. The U.S. is the single largest biopharmaceutical market in the world. When laws such as the IRA change that expectation of a financial reward in the U.S., they affect investment decisions in drug development and, by extension, the drugs and indications that are approved for use to improve and extend life.

Medicare provides seniors and disabled people access to many necessary services, including prescription drugs, with financial subsidies for additional support. The addition of the Medicare Drug benefit over twenty years ago has allowed millions of people affordable access to a broad array of medicines, far more access than they would have received in many other countries with federal price-setting systems.[3]

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There are meaningful and important benefits for Medicare beneficiaries and the federal government in the IRA. However, some of the changes to Medicare in the IRA can create barriers to access for medicines that improve health and extend life. The impact of the law as it is implemented should be monitored and these impediments to access to life-changing medicines addressed if they materialize as expected.

The IRA, as it is designed, does not root out inefficient investment or wasteful spending; in fact, it does quite the opposite by shifting effort away from treatments for some of the highest need people in the U.S. Of course, improving health through medical innovation should not be done at any cost. The people and institutions who pay for healthcare also must be able to afford a medicine or vaccine for it to be useful. However, the approach taken in the IRA to contain costs is poorly designed as it both distorts investment away from efficient drug development and has the potential to reduce access to medicine and increase costs. There are approaches to revise some of these distortionary, likely unintended effects, which I will offer in my testimony, where I make the following points:

- The amount of money invested in the clinical study for medicines and vaccines is related to the expectation of the financial outcome from that investment; otherwise said, clinical development programs with a more positive return are viewed more favorably when allocating capital toward R&D, and less favorably when the financial returns are reduced. The IRA reduces the financial reward from valuable types of investment, thereby reducing the number of approved drugs or new indications for existing drugs for seniors and disabled people.

- The IRA affects pricing and clinical development decisions for all drugs, including all drug candidates in development. The effect is not limited to the select drugs that will have the price set by the federal government through the Medicare Drug Price Negotiation Program (MDNP).

- The MDNP, as created by the IRA, is a price control, not a negotiation. It is not based on endorsed methods for value assessment or those used by other countries. The approach is bureaucratically burdensome, wasteful, and inefficient; it provides no valuable information to physicians or consumers to guide treatment decisions, and it does not establish prices reflective of the therapeutic value of a medicine.

- The IRA is anticipated to raise costs and increase barriers to access to medicines for many seniors and disabled people who rely on Medicare. It has the potential to further erode a well-liked program that has constrained costs over time. The Medicare Part D program is already experiencing a reduction in access to affordable drug plans and medicines, and the IRA is likely to exacerbate this decline.

As I have relied on income from biopharmaceutical companies to make my living for most of my career, you may determine that I have a bias. Or, you might determine that I have first-hand knowledge of how policy affects investments in clinical study, prescription drug affordability, and, therefore, health. You may decide that my experience working in the private sector can help to inform the committee about the likely outcomes of such a major change in law as the IRA. I hope you will hear what I have to say and conclude that the information I share with you is instructive. Should this information be compelling, the committee may decide that it is important to be mindful of the unintended consequences of the IRA and

will take action to ensure there are systems in place to carefully monitor the impact of this law on clinical development and access to affordable medicines and take corrective action as warranted.

I focus principally on the effects of the IRA on Medicare Part D, the largest drug benefit within the Medicare program.[4] I will offer some potential approaches to reform the oversight or implementation of the IRA that would reduce the potential harm to health from this law.

Background

The Inflation Reduction Act (IRA) brings in landmark changes to the Medicare drug benefit program, it:

- Directs the federal government to set drug prices in Medicare;
- Redesigns the Medicare Part D drug benefit, shifting more financial risk onto health plans and Pharmacy Benefit Managers (PBMs);
- Imposes a financial penalty on drug companies that increase prices faster than consumer inflation, with limited exceptions; and
- Limits the amount a beneficiary is required to pay out of pocket for their covered medicines in Part D over the course of one year.

Today U.S. drug prices are principally negotiated between drug companies and private insurers, except for Medicaid and certain other federal programs. Drug companies set a list price in the U.S., considering the medical value of the drug, the cost of alternative therapeutic options, federally required discounts, and what is likely to be affordable by insurers, insurance beneficiaries and payers. Through negotiations with health insurers and PBMs discounts may be offered for more favorable placement on a formulary, meaning the beneficiary pays less or has fewer hurdles, such as prior authorization requirements, to get their medicine.

In Medicare, the IRA upends this system, which has resulted in low premium growth and steep discounts on medicines. While the Medicare program's cost and ability to support beneficiaries' health needs can be improved with changes in law or regulation, Centers for Medicare and Medicaid Services (CMS) data show that Medicare Part D's competitive market-based structure successfully worked to constrain premium growth while ensuring access to medicines through a wide variety of drug plan choices.[5] Medicare Part D enrollees report high satisfaction with their coverage.[6]

The amount of money and effort invested in R&D is influenced by two key factors: first, by the likelihood that the science being investigated will be successful in modifying a disease or symptom safely, and second, that there will be a financial reward from an approved treatment. Most clinical investigations do not result in new drugs. Most drug investigations fail, and most approved new drugs are not profitable enough to make back the return on the investment in their development, considering all the failed attempts. So, investors place bets on several drug development programs. Information from both failed and successful investigations inform future R&D efforts. Capital comes from biopharmaceutical companies and venture and institutional investors. Each source of capital is deployed toward therapeutic investigations deemed most likely to succeed, considering both therapeutic and financial outcomes.

Potential unintended consequences of IRA for both long-term and near-term access to medicines have been identified by observers ranging from academics to business leaders to patient organizations. These consequences include the distortion of investment away from clinical development for medicines primarily used by seniors and disabled people and more restrictive drug formularies and increased use of utilization management (UM) tools in Part D plans. Moreover, due to the new financial pressures, there is a potential for loss of beneficiary choice as a result of fewer Part D plans, particularly stand-alone drug plans (PDP). The incentives that motivate these changes are further described in my testimony.

Drug Price Controls

The IRA directs the Secretary of Health and Human Services (HHS) to establish an MFP for the medicines in the MDNP. Specifically, the IRA directs the government to set the prices for medicines that generate the most expense for the Medicare program, considering gross drug sales. The approach to price setting does not consider offsetting savings effects such as negotiated drug discounts or savings from health benefits such as fewer visits to the hospital from treatment. While the MDNP has been called a "negotiation" in the IRA, if a company were to not agree to the price, they would be subject to a financially ruinous penalty. The company has no reasonable option to not accept the government price and still remain a viable business. That is not a negotiation; the MDNP is a price control.

CMS will select Part D drugs for determination of price control or Maximum Fair Price (MFP) for 2026 and 2027, then expands to Part D and Part B drugs in 2028 and onward, forever. For the selected drugs, the IRA requires the biopharmaceutical company to provide information to inform its MFP determination including: clinical trial evidence; comparative effectiveness to other therapies, if unmet needs are addressed; the amount spent on research and development (but only in the current holding company); unit costs of production; federal money invested in the drug; existing patents; and total global sales. Many of these elements have no connection with the value of the medicine to patients or the health system and are not used by other governments in setting drug prices or endorsed by researchers who conduct value assessments.

The law distinguishes the drugs eligible for MFP selection (with certain exceptions) as FDA-approved:

- Pursuant to a New Drug Application (NDA) at least seven years prior to the date of selection and for which no generics have been marketed (herein small molecule drugs). The MFP generally will take effect approximately two years after selection (i.e., as early as nine years after approval).

- Pursuant to a Biologics License Application (BLA), at least 11 years prior to the date of selection and for which there are no biosimilars marketed (herein large molecule drugs). The MFP generally will take effect approximately two years after the selection (i.e., as early as 13 years after approval).[7]

The effect of this federal price-setting program is more far-reaching than just impacting the few drugs that will be price-controlled. At the time of a drug development investment decision, the investor cannot know which drugs will be selected for price setting in Medicare. But they would likely view an investment as riskier if there were a chance the drug would be selected. In addition, the price of a competitor drug also affects the expectation of revenue for a drug in the same therapeutic class, so large therapeutic classes for older and disabled people who use Medicare, such as neurology or

oncology, also become riskier for investment because of the likely presence of price controls in the market.

Moreover, the six billion dollars in estimated savings from the MDNP is likely an overestimate of savings when other offsetting factors are considered.[8] Consider that the drugs with an MFP are not subject to the IRA's Manufacturer Drug Discount Program, which requires that biopharmaceutical companies provide discounts from 10% and then 20% for beneficiaries who have high drug expenses. This offset, among other costs such as less investment in drug discovery, needs to be considered when evaluating if the MDNP is actually a successful policy.

Many of the drugs that were selected for the MDNP already had deep discounts in Medicare indicating that there were competitively negotiated pricing arrangements in place.[9] Drug companies provide those discounts to Medicare plan sponsors (insurance companies or PBMs) for preferred placement on the formulary, often without hurdles such as step edits or prior authorization. The IRA directs CMS to get a price lower than the minimum privately negotiated discounted price. With the threat of a huge financial penalty, CMS achieves that outcome of lower prices relative to market competition. But it is reasonable to question if selecting drugs where the market is already working to lower prices is the right place to focus this expensive and time-consuming effort, particularly since it also discourages investment in clinical development for highly needed, popular and often deeply discounted drugs.

Intellectual Property

Possibly the people who drafted the IRA wanted to fix the rare situation where a popular drug does not face generic competition and retains pricing power more than 13 years after it is approved and marketed. The MDNP with its price controls later in the lifecycle, the IRA reads as if this is somewhat the intent, although flawed in design and not targeted at these exceptions.

The term "patent thicket" refers to a product with so many patents it is believed there is an impenetrable wall of intellectual property protection deterring competition. However, the proliferation of generic medicines, 48 FDA-approved biosimilars, and the average market exclusivity period of 13 to 14 years for small molecule branded medicines before multi-source generic entry is evidence of a largely well-functioning intellectual property system.[10],[11] The U.S. is the first country to receive access to the vast majority of approved medicines, including those for serious and rare conditions, and more than 90% of all prescriptions filled at a pharmacy in the U.S. are for typically low-cost generics.[12],[13]

Medicines with larger revenues experience more patent challenges and earlier generic entry. The MDNP with its escalating price controls for older medicines has the potential to discourage generic and biosimilar drug development by making branded markets smaller. Larger branded markets tend to have more generic competitors that drive down prices and sustain supply. [14] Unfortunately, the IRA price controls can dissuade generic entry and hinder the market mechanism that has controlled prices while encouraging investment in clinical study for drug development.

Large molecule medicines do not have the same dynamics of competition at the end of their period of patent protections and regulatory exclusivity. The branded biologic retains a larger market share relative to an off-patent branded small molecule medicine. [15] However, there is an FDA approval process for biosimilars seeking to be deemed interchangeable with the branded medicine, while some states permit automatic substitution of biosimilars. In addition, barriers to access for biosimilar medications are not necessarily related to intellectual property but rather formulary design in insurance plans that retain

favorable placement for a branded biologic and don't prefer the biosimilar. There are approaches to reducing costs BLA approved drugs that don't involve price controls.

The FDA grants certain medicines additional regulatory exclusivities to encourage investment in clinical development in therapeutics that have a higher development cost or a lower expectation of profitability. These include incentives for drugs for rare diseases, studies in children and medicines for certain type of infections. The IRA, by setting the price even while these exclusivities are in place, erodes the value of these incentives that were hard-won by patients and their advocates, including members of Congress. The incentives contribute to the development of treatments for patient populations that market competition might not otherwise serve.

Patents do not block competition. In fact, more than half of drugs receive a challenge from a generic manufacturer before their patent terms expire; and many of those challenges result in allowing a generic to enter the market while patent protection remains for the brand drug.[16],[17] Moreover, brand-to-brand therapeutic competition can also be cost-saving, driving down net prices with discounts and rebates between therapeutic competitors for formulary access. The market, competition, and the laws established in the Hatch-Waxman Act typically reach a solution that is cost-saving without the need to resort to federally set price controls.

Investment in Clinical Study

Current analysis and evidence of the relationship between market size and R&D investment that inform forecasts on the impact of the IRA are not only dated, but they are also limited. For example, the Congressional Budget Office (CBO) predicted the impact of market size on new drug development from the IRA. Ongoing development of already-approved medicines, such as for new indications or in special populations, is also a significant contributor to health and affected by the IRA. Drug development today is far different that it was ten years ago. Furthermore, due in large part to the lack of data, models that agencies like the CBO can develop to predict the impact of the IRA by simulating firm decision-making are not specified to reflect the mobility of capital, or grounded in data that reflects the full spectrum of investment decisions in different therapeutic areas. So, existing estimates, even by sophisticated and highly skilled organizations like the CBO, are limited in their ability to fully describe the impact of a change in law like the IRA.[18]

It is both intuitive and well-established through empirical studies that companies will invest more in R&D for therapeutics with higher expected revenue.[19] Therefore, it is expected that the reduction in revenue for drugs that have an MFP will translate into a reduction in clinical trial activity. The US is 40% of the world's biopharmaceutical market.[20] So, any change to US pricing, and therefore global drug revenue, has a sizeable effect on investment in drug development for the world. While some may question the fairness of the system, it is, in fact, the reality of drug development dynamics that the U.S. market opportunity is a major driver of investment in medical innovation and, by extension, global health.

Analysis of prior changes to market dynamics demonstrates this relationship, although there remains considerable uncertainty about the magnitude of the effect. One paper uses European market share as a proxy for pharmaceutical price regulation; the authors find that R&D spending is inversely correlated to the share of returns generated in a market with regulated prices.[21] Other research has demonstrated the relationship between expected revenue and investment in clinical development, as reflected by the number of new treatments pursued in therapeutic areas of different sizes.[22] Given that global expected

revenues drive innovation, it has been evidenced that decreases in expected U.S. revenue will impact global R&D investment.[23] In totality, findings from a broad selection of published literature indicate that price controls on medicines reduce the likelihood of investment in R&D for medicines and medicines advancing through the clinical development process to be considered for approval by the FDA (additional research [24],[25]).

Another challenge in estimating the association between market size and R&D is that the amount of capital required and the associated risk of investment are variable throughout the development lifecycle for a drug, with distinct entities involved. Each of these entities has a different ability to tolerate financial risk and deploy capital; these differing tolerances and their interaction along the drug development change are poorly studied or understood. A model such as the one used by the CBO should reflect the risk tolerance, access to capital, and alternative uses of capital in the distinct phases of development and changes in the cost and time involved in drug development over time.

The IRA imposes a sizeable new element of risk for investors in an already high-risk endeavor, and their response to that change in risk is poorly understood. The impact of the IRA on investment in drug development from early discovery to pivotal clinical trials for drug approval to post-market study should be carefully monitored to fully appreciate the impact on global health. The current estimate by the CBO is limited in its ability to forecast the implications of this law.

In defining how a drug is selected in the IRA, both in statute and in implementation, certain decisions were made that further distort investment in clinical study. These include the decision to group together all approved drugs of the same moiety and consider them as one drug even if they have different clinical development programs, indications, and drug approval applications. This means that two drugs with highly different therapeutic uses and separate (and expensive) clinical development programs would be considered the same drug for the MDNP. New uses of existing drugs are an efficient form of development that often relies on existing evidence from earlier studies. This approach of combining all drugs of the same moiety encourages companies not to make that type of investment in additional development programs for the same moiety if that investment in new evidence were to push the total revenues of the drug to the threshold where it may be selected for price-setting in the MDNP.

In addition, the IRA directs that the MDNP will only consider a drug to be exempted as an orphan drug if there is only one orphan indication. But historically, 35% of FDA-approved novel orphan drugs had multiple indications.[26] Drugs are often found to be effective in one orphan disease and then also beneficial for a disease that is modified by the same mechanism. However, demonstrating efficacy in a separate disease requires the collection of evidence through additional clinical studies that require investment and time. A drug developer or investor is willing to spend for the clinical development in one small group if there is an expectation that the drug can be developed for additional diseases. By only exempting drugs with one orphan indication, the MDNP discourages this incremental investment if it were to elevate the revenues of the drug to the point where it may be eligible for selection.

A medicine approved for one indication may expand its use to other types of conditions by demonstrating it is a safe and effective treatment for that disease. New indications can also be used for different patient populations with the same disease or different stages of a disease. This is typically done through human clinical trials, most drugs are studied after the first indication is approved, and often patent holders seek approval in more than one indication.[27] This type of development, for an additional indication, can expand its use into a new population. Moreover, additional indications can often be demonstrated in fewer clinical studies relative to the first approval.[28]

Most drug development is not profitable, but a minority of drugs that are approved can be quite profitable. This is how investment is sustained in clinical development. It is not sufficient to "recoup" the cost of development one drug. Many approved drugs never recover their cost to develop when considering failures and cost of capital. The promise of a largely successful drug financially, or an incremental gain in science that leads to a financially successful drug is what continues to draw capital to an endeavor that is often a failure. The biotech companies that fail in their clinical development or fundraising have no or negative profit, but they are not observable when they go out of business. Examining the profitability of only the large or successful firms is not a complete picture of the financial dynamics of the biopharmaceutical industry and the impact of laws like the IRA.

Distinct Diseases and Types of Medicines

Small molecule medicines approved through an NDA are more affected by the IRA because the MDNP selects those medicines sooner after they are approved by the FDA relative to large molecules. In addition, they are more affected because the MDNP selects the largest gross revenue medicines in Medicare Part D first, which tend to be small molecules.

To estimate the effect of the MDNP on different types of drugs, in research soon to be published my co-authors and I identified the drugs that have already been selected for determination of an MFP effective in 2026 in a recent research report. We also forecasted the drugs likely to be selected for the MDNP effective in 2027 and 2028. We found that small-molecule drugs comprise 70% of the drugs expected to be selected for an MFP effective in 2026, are likely to make up 93% of the drugs selected for an MFP effective in 2027, and 87% of the drugs selected for an MFP effective in 2028. Furthermore, small-molecule oncology therapies were estimated to be the predominant type of drug and therapeutic class affected by the MFP, followed by small-molecule therapies for respiratory conditions and small-molecule medicines for diabetes.

We estimated the expected decline in revenues for three representative drug types if they were subject to an MFP. We projected that revenue from small molecule drugs with an MFP will be reduced the most, 28% over 18 years, compared to a 11%-15% revenue reduction for the two types of large molecule drugs modelled. We then estimate the anticipated reduction in clinical development due to the lower expected revenue. We project a 35% decline in clinical trial development both pre and post-market for small molecule drugs with an MFP. In our model, the total impact of the IRA on clinical trial investment is underestimated as we do not include the impact of other IRA policy changes in this study, such as the Medicare drug benefit redesign. [24]

Small molecule drugs are essential to treating certain conditions. In addition, their clinical development post-market contributes to expanded therapeutic uses and new indications. Furthermore, the generic savings achieved when small molecule medicines lose exclusivity are sizeable, particularly when compared to large molecules and biosimilars.[29] Additionally, because the MFP has a dominant effect on small molecule medicines for certain therapeutic areas, including cardiovascular disease, the policy has an inequitable impact on certain patient groups with specific conditions and unmet needs, including Blacks who have higher rates of cardiovascular disease and experience poorer health outcomes on average in the U.S. healthcare system. Furthermore, small-molecule medicines are typically taken at home rather than infused in a health provider's office, and that mode of administration may be favorable for people who are underserved by the health system or have limited access to providers.

Many medicines approved by an NDA, and subject to the IRAs more punitive price controls, are small molecule pills that are relatively straightforward to manufacture (although manufacturing cost is a fraction of the costs of developing a medicine). The IRA small molecule price controls, with their poor construction, also limit investment in promising and transformational therapeutics that are complex to manufacture, including long-acting injectable therapeutics for HIV and other hard-to-treat conditions. For example, drugs using small interfering RNA (siRNA) for metabolic and neurodegenerative diseases are also among the NDA medicines. There are also multiple trials examining siRNA enabled technology on other diseases, including of the eyes and skin. If approved, these medicines could be transformative. But they will not be developed if investors lose interest in their commercial potential because of the IRA price controls.

At the IRA's inception, cancer medicines were predicted to be a major target of the MDNP, and were among the group of medicines to be selected for price setting, which will become effective in 2026, the first year of the MDNP.[30] This was expected because roughly 15 percent of people in Medicare have a cancer diagnosis requiring treatment, and many of their treatments are costly, which results in sizeable Medicare expenditures.[31] As medicines to treat cancer are likely to be a focus of the MFP it is worth additional consideration of the effect on this therapeutic area, particularly on clinical development after a drug is approved.

The MDNP price-setting reduces expected revenue from post-marketing clinical investigations and is likely to affect investment in these studies. It is common to conduct clinical studies on cancer medicines years after the FDA approves the medicines. This includes evaluating the approved medicine in earlier disease stages, when it was initially approved in a later stage metastatic setting; for new treatment regimens; or in patient groups such as children that are often not in the clinical studies required for drug approval. This evidence collected after approval may be submitted to the FDA for a new indication for the drug, or it may be published as additional information that informs healthcare providers and patients that the medicine has been tested for a specific use and its estimated therapeutic effect.

For the past 20 years, new cancer treatments have developed rapidly, with the approval of new targeted therapies and immunotherapies and the development of more convenient personalized treatments, such as small molecule pills that can be taken at home.[32] Incremental improvements to cancer medicines have led to substantial increases in overall survival.[33] However, there remain many types of cancers with high unmet needs. For example, few treatments exist for rare cancers, and some common forms of cancer, including lung and hepatocellular, have high recurrence rates. In oncology, most commonly, it is incremental improvements to existing therapies through new indications**,** combination therapies**,** and clinical studies of patients underrepresented in pivotal studies that can lead to significant treatment advancements that improve key health outcomes, including longer life (overall survival) and better quality of life.[34]

In a historical simulation of the effect of the MDNP, my colleagues and I developed a revenue impact model that assumes the MDNP had been implemented in the early 2000s (research paper forthcoming). We identified five cancer medicines in Medicare Part B and Part D that were likely to have been selected for the MDNP. Of those drugs we selected and analysed, 31% of the new FDA-approved indications would have been filed after the drug was selected for the MDNP had it been in place; 24% of the new indications were for small populations (5 in 100,000 age-adjusted). 62% of the post-marketing studies evaluated the drugs used in combination with other therapies.

Following the methodology of Agarwal and Gaule (2022); Blume-Kohout and Sood (2013); Dranove et al. (2014); and DiMasi, Grabowski, and Hansen (2016), we estimate the number of post-marketing clinical studies that may not have occurred due to reduced pharmaceutical company revenue from sales exclusively in Medicare for the selected drug as a result of the MDNP.[35] The MDNP was projected to have reduced pharmaceutical company revenue from sales in Medicare for the selected drugs by 5% to 24% in this analysis. For the small molecules in this analysis the revenue reduction ranges from 14% to 19%. The average expected reduction in post-marketing clinical studies for those five drugs ranges from 10% to 79%. (research paper forthcoming)

Access to Medicine in Prescription Drug Plans

The IRA restructures the Part D benefit and interjects a government price-setting process into a system where private companies have managed price negotiations for almost 20 years. This could substantially alter plan incentives and market dynamics.[36] The IRA requires Part D plans to cover the price-controlled drugs on the formulary, but it does not prohibit other limits, such as utilization management or require competitor to offer a lower net price to remain on formulary. Certain manufacturers may already be offering discounts below the MFP of a competing drug and formulary will be unaffected. However, in other cases, manufacturers may be unwilling or unable to offer a more sizable rebate to compete with the government-set price to maintain a position on the formulary. Thus, depending on how plans' rebate negotiations play out, access restrictions may increase for drugs with government-set pricing or competing medicines.

While the program is administered by private plans, it has minimum requirements for drug coverage that the CMS is directed to review.[37] Plans may choose to exclude some drugs from a formulary or include drugs but place restrictions on their use. As part of the current federal oversight process, CMS reviews Part D formularies. In so doing, it considers a number of process-oriented standards, including whether the plan offers medically necessary drugs, follows "appropriate guidelines," and has formularies that were constructed based on "best practices" for drug management and not constructed to avoid enrolling beneficiaries with certain health conditions or needs.[38]

Access restrictions have been increasing despite CMS oversight, which has led to questions about how formulary will be overseen following the implementation of the IRA (concerns have led to a US Government Accountability Office study on the issue).[39] Although CMS has statutory and regulatory standards and procedures in place that seek to ensure that Part D formularies do not discriminate against certain beneficiaries or establish clinically inappropriate access limits, these standards have not undergone a comprehensive update in many years.[40]

In a survey of 50 US healthcare payers in 2023, 76% of responding plans anticipated that the IRA's Medicare Part D redesign would lead to narrower formularies relative to the current formulary design, 42% expect more utilization management overall.[41] Another recent survey of 30 payers reported that in the wake of the IRA, payers are likely to restrict access, encourage the use of physician-administered (Medicare Part B) medicines rather than pharmacy-benefit (Medicare Part D) medicines, and remove established drugs from Medicare formularies.[42]

Certain medicines in Medicare Part D fall under the protected class policy, which requires Medicare Part D plans to cover all or substantially all medicines in six classes and categories.[43] These medicines have enhanced formulary coverage due to the high risk to a person's health and well-being posed by treatment disruption or restricted access. For other categories of covered drugs, Medicare Part D plans

have more leeway to exclude drugs from the formulary. Over time, beneficiaries' access to medicines in Medicare Part D plans has become more restricted among both protected and unprotected classes.[44]

By 2020, after years of increasing formulary exclusions, Medicare Part D plans restricted coverage for 44% of all medicines. This includes excluding 30% of the non-protected classes of medicines from formularies (vs. 20% in 2011) and increasingly imposing prescribing restrictions on the formulary, such as step edits or prior authorization requirements (14% of the time in 2020 vs. 12% of the time in 2011). Among brand medicines, these restrictions were more constraining; more than two-thirds of brand medicines were either excluded from the formulary or subject to utilization management restrictions in 2020.[45]

According to another analysis specific to coverage in protected classes, Medicare Part D plans covered only 46% of the branded drugs in protected classes in 2019, a decline from 60% in 2016. Lack of branded drug coverage was particularly high in antidepressants and immunosuppressants, with only 27% and 29% of those branded medications covered, respectively.[46] This increase in restrictions on all medicines, including those in the six protected classes, occurred under the current process of formulary oversight by CMS.

Formulary restrictions are imposed more frequently by stand-alone prescription drug plans (PDPs) than by integrated Medicare Advantage prescription drug plans (MA-PDs). Because Medicare Advantage plans also cover medical benefits such as doctor visits, hospital stays, and surgery, they have stronger incentives to ensure that patients can access the drugs they need and adhere to their treatment plan to avoid the medical costs associated with untreated conditions.[47] PDPs are responsible only for drug coverage, so they are not sensitive to the medical costs resulting from restrictive formularies, such as for more hospital care due to untreated conditions. They have weaker incentives to maintain comprehensive formularies.[48]

The IRA changes the structure of the Medicare Part D benefit and increases the financial liability for Part D plans, particularly for people eligible for the low-income subsidy and those in worse health and with a high need for medication.[49] The federal government had previously covered 80% of the cost of medicines for people who reach a high level of drug spending. The purpose of the subsidy was to reduce the incentive for plans to use restrictive formularies or other approaches to avoid the enrollment of people with high prescription needs.[50] The IRA significantly reduces the protection of a federal subsidy for all beneficiaries, including those who are low-income and receiving extra help. Post-IRA, in 2025, the government subsidy in catastrophic coverage is reduced to 20%, with 60% of beneficiary catastrophic prescription drug costs covered by Medicare Part D plans and 20% covered by biopharmaceutical companies.[51]

As a result, plans will have significantly more responsibility for beneficiaries who incur higher medicine costs, which tend to include those with complex conditions such as multiple sclerosis, HIV, certain cancers, and autoimmune diseases. While the government subsidizes some of these costs through risk-adjusted payments, there is a concern that plans may find that the risk adjustment does not adequately cover the costs for these beneficiaries and respond by narrowing formulary coverage for certain conditions so as not to attract beneficiaries needing these drugs or to avoid the costs of these medicines in their enrolled beneficiaries.[52]

Additionally, under the IRA, Medicare Part D beneficiaries will no longer have to pay for covered drugs once they have accrued $2,000 in out-of-pocket drug costs. This is an important benefit to patients, but preserving their access to affordable medicine is not guaranteed with this provision. Coverage of costs

above $2,000 is relegated entirely to plans, biopharmaceutical companies, and the federal government. This provides greater financial certainty to beneficiaries but newly incentivizes plans to increase the use of utilization management tools for medicines to reduce the likelihood of their beneficiaries entering the catastrophic coverage part of the benefit, with the associated higher financial liability for the plan.[53] Plans may deter high-cost or high-risk patients from enrolling in their plans with their formulary designs or by managing their beneficiaries' drug utilization more tightly, as was seen following the enactment of the Affordable Care Act.[54]

As of 2024, Medicare beneficiaries have fewer stand-alone PDPs to choose from today than they did at the beginning of the Medicare Part D program. While some beneficiaries may find they have an equally sufficient alternative in an MA-PD, some who prefer to use fee-for-service Medicare may not have the same access to a PDP. Between 2020 and 2024, the number of PDPs available to the average beneficiary nationwide decreased by 25%. The number of insurance companies sponsoring PDPs decreased from fifteen in 2023 to eleven in 2024, the smallest number since the Medicare Part D benefit was launched in 2006.[55] This trend is expected to worsen in 2025 and beyond as other IRA provisions take effect. For example, Mutual of Omaha Rx has already announced that it will exit the Medicare Prescription Drug Plan market at the end of 2024, citing the IRA as the reason.[56]

Plan exits from the Medicare Part D market are likely to further exacerbate beneficiaries' already shrinking choice of pharmacies. In 2024, enrollees in PDPs have fewer pharmacy options than ever before, particularly with respect to smaller, local pharmacies in their area, as 94% of Medicare Part D PDP plans have a preferred pharmacy network that local pharmacies do not participate in.[57] This declining availability may force Medicare Part D beneficiaries to pay higher cost sharing at their local independent pharmacy if it is out of network or to switch pharmacies.[58] More than 90% of independent pharmacies have threatened to leave Part D entirely in 2025 due to poor reimbursement by Medicare Part D plans. The narrowing of PDP plans that we see in 2024 further exacerbates these pressures on shrinking access to local pharmacies.[59]

While many of the changes in the IRA are designed to be beneficial to patient affordability and reflect a reasonable rebalancing of government subsidy to plan costs, increases in formulary restrictions and fewer choices of plans under the IRA's MFP price-setting and Part D redesign provisions could have significant negative implications for patients. Moreover, these impacts fall disproportionately on beneficiaries who receive the low-income subsidy (where access restrictions and loss of plan choice may be most significant), who are also more likely to be in a racial or ethnic minority group.[60] This threat to patient access could represent a risk to the Medicare Part D program's success, and the health benefit it provides, if specific action is not taken to preserve affordable plan options with reasonable access to medicines. These effects should be monitored and addressed as needed to ensure there remains a balance of cost saving and patient access.

Beneficiary Savings

Examination of existing Medicare Part D formularies suggests that most beneficiaries are unlikely to see a substantial change in their out-of-pocket (OOP) costs for the first ten drugs subject to the MDNP. In a recent analysis my colleagues and I evaluated the ten medicines selected for price setting in 2026; seven of the ten selected drugs are predominantly on formulary tiers that require a fixed co-payment, meaning beneficiaries' OOP costs often remain the same regardless of the underlying price of the drug. The remaining three of the first ten selected drugs are specialty medicines most typically subject to co-insurance, calculated as a percentage of the drug's list price. However, people taking specialty drugs,

whether they are selected or subject to price setting or not, will likely reach the OOP maximum. This means that affordability gains are likely predominantly the result of the IRA's new $2,000 cap on all out-of-pocket Part D expenses, not government price setting.

We evaluated the formulary placement in Medicare drug-only plans (PDPs) and integrated medical and drug Medicare Advantage (MA-PDs) separately for the first ten drugs selected for the MDNP. MA-PD plans have been growing rapidly in enrollment relative to PDPs. When evaluated for the ten selected drugs, the dominant formulary position is the same in MA-PD and PDP for all ten drugs, with few differences across the plans. We see more use of co-insurance relative to co-pay in the PDPs compared to the MA-PDs, higher co-insurance rates in MA-PDs, and similar rates of prior authorizations for the ten selected drugs. In our analysis, seven of the ten selected drugs for the MDNP were already on formulary in 90 percent or more of the formularies analyzed, two have roughly 60 percent coverage on all formularies, and one was on half of the formularies in 2023. [61]

Our analysis indicates that, while the MDNP may save money for the federal government, the cost-sharing for many patients is unlikely to be very different from today for the first non-specialty drugs selected in Part D; this is the case in particular for people enrolled in the fastest-growing Medicare Part D plan type, the integrated MA-PD. Moreover, cost sharing for specialty drugs with and without an MDNP will be similar due to the out-of-pocket cap. This is provided that plans do not meaningfully change their formulary management practices for drugs with MDNP. There may be other changes to formularies, such as increasing the use of prior authorization or step edits, shifting beneficiaries to drugs in Medicare Part B with physician administration and no out of pocket cap, to manage utilization in the presence of the out-of-pocket cap, which remains to be seen and should be followed.

In addition, a recent analysis projected that beneficiaries using any of the selected drugs for the MDNP are more likely to see their OOP costs increase than decrease in 2026 and that 3.5 million beneficiaries may see OOP cost increases of 12% on average because of changes in the way subsidies and costs are treated in calculating beneficiary progression towards the OOP maximum. Beneficiaries receiving low-income subsidies, those enrolled in Employer Group Waiver Plans, and Black and Asian beneficiaries are expected to bear the greatest OOP cost increases relative to other groups.[62]

Beneficiaries may also incur additional costs as a result of increases in premiums. The IRA does include a cap on the base beneficiary premium, but that does not mean that an individual's plan premium will not exceed the cap; in fact, most beneficiaries are in an enhanced drug plan, electing coverage that exceeds the base benefits. In fact, after observing sizeable increases in plan bids to staunch premium growth in 2025, CMS has announced a demonstration project that will subsidize the stand-alone (PDP) plans' premiums to make them lower for beneficiaries. This approach, while sensible to help low-income beneficiaries, essentially blunts the effects of the IRA for a short period without establishing a long-term solution.

Price Setting In Other Countries

Supporters of federally established price controls for medicines in the U.S. often point to examples from other countries. For example, Health technology assessment (HTA) has been implemented by countries to evaluate new drugs and inform their prices. These systems for the most part operate quite distinctly from the MDNP. HTA programs in other countries assess different measures to determine value and price, including clinical effectiveness, cost-effectiveness, and broader societal impact.[63] Countries with HTA systems restrict or delay access to medicines relative to the U.S., and there are questions about the

appropriateness of certain value assessment parameters, particularly as it relates to the value to patients, for example, whether it accounts for improvements in their quality of life.[64] The U.S. can learn from the flaws and not carry them into its health policies.

The U.S. does not have a centralized HTA approach but rather has relied on a market-based price system where health plans evaluate evidence and make decisions for their populations. This stance is evident in the Affordable Care Act's (ACA) prohibition of quality-adjusted life years (QALYs) and other government value determinations in coverage decisions. However, the IRA represents a significant departure from this paradigm. It directs CMS to incorporate comparative effectiveness research (CER) in determining the MFP.[65] However, since the MFP has a hard upper limit price that cannot be exceeded, in many cases, it would be impossible for CMS to establish a price that adequately reflected the value of the medicine, particularly if the market were already providing a value-based discounted price.

A clear rationale explaining why a drug received a certain value assessment and disseminating it publicly can help all stakeholders understand expectations and requirements.[66] For example, patient groups, physicians, and the industry have heavily criticized the Canadian HTA body for its closed-door decision-making, with reports excluding committee members' perspectives and lacking information on votes. This has led to inconsistency between health care practitioner (HCP) endorsement of key innovative products and restricted access from the agency. [67]

The MDNP has been criticized for insufficient guidance and procedural clarity. For example, in its revised guidance, CMS admitted that despite receiving more than 7,500 comments from stakeholders, it had only responded to ones it considered "significant." In doing so, some stakeholders believe that CMS may have violated the notice and comment requirements for issuing regulations, leading to criticisms of procedural impropriety and undermining the legitimacy of the MFP process guidance.

Stakeholders have called for clearer guidance from CMS on the methodology used to determine the MFP, such as how the different data elements are considered or weighted when establishing a price. The lack of clarity means that companies do not know what types of data to invest in to demonstrate the value of their medicines. CMS risks sending misleading signals to manufacturers and creating a flawed and inefficient price-setting process. This is particularly pertinent for using R&D cost data, which is not a reflection of value and should, from an economic perspective, at the very least, be down-weighted in the MFP methodology.

For patients, the central issue is the degree to which their input is considered during the HTA process. For example, in Italy, there are limited opportunities for patient organizations to be involved in the national HTA process.[68] Additional issues relate to how patient input is considered; in South Korea, patient groups have stated that despite feeling like they are being represented in the HTA process, there is a lack of transparency and information regarding how this is used to determine reimbursement decisions.[69] A criticism of the MDNP has been the lack of meaningful engagement with external stakeholders and the uncertainty surrounding how their input will influence CMS decisions. For instance, while patient listening sessions were conducted, these offered limited opportunities for two-way communication and lacked diversity among participants. The failure to meaningfully consider patient input can prohibit understanding the patient experience, including the types of outcomes they deem important to their health.

Engaging with a broad range of stakeholders (e.g., patients, clinicians, and industry) ensures that diverse perspectives, values, and priorities are considered in the value assessment process, leading to more

informed, equitable, and balanced decisions. For these reasons, the importance of stakeholder engagement and patient centricity in value assessment is increasingly recognized.[70] This is reflected in several countries, including Australia, England and France, taking steps to provide more opportunities for different stakeholders to provide input and then ensuring that this voice is heard during the value assessment process. This can include establishing measures (or outcomes) based on attributes that matter to patients or amending the evaluation framework to ensure relevance to patients. For example, assessors are being prompted to consider additional factors that matter to patients, such as the ability to care for oneself, caretaker burden, and quality of life.

Recommendations

The IRA is a significant change to Medicare, the largest insurer in the largest country in the world, with anticipated impacts on clinical development and access to medicine that are of unknown magnitude. While there will be some gains from the law for the federal government, taxpayers, and Medicare beneficiaries, there are also unintended consequences. These likely consequences include reduced investment in certain types of drug development, particularly treatments for older and disabled people approved through an NDA pathway (aka "small molecule medicines"). The IRA is anticipated to accelerate an existing trend of hurdles to access to medicines and, in particular, limited availability of affordable stand-alone drug plans (PDPs). Careful monitoring and modification of elements of the IRA that can be detrimental to health and cost are warranted before any expansion is considered or before the IRA is considered a success.

I offer recommendations here in my testimony with the following objectives: limit the potential harm to investment in drug development, promote competitively established discounts that can reduce costs and expand access to medicine within the existing Medicare framework, reduce costly and burdensome administration, assess the impact of the IRA on access to medicine as well as cost, expand access to useful information about the value (or lack of value) of medicines with input from people and researchers with multiple perspectives.

Should it determine that federal price controls are to remain, Congress could consider ways to reduce the impact of the IRA policy on drug development by reforming the MDNP to be more predictable and to mimic the natural lifecycle of a drug with costs declining due to multi-source drug entry. Specifically:

- The MDNP only sets a price in Medicare that is implemented 13 years after FDA approval and marketing, not before for any type of drug;

- Eliminate the administratively burdensome MDNP for price setting. Replace it with a simple, predictable, and transparent price after 13 years, such as a fixed percentage of the non-Federal Average Manufacturer Price (non-FAMP);

- Eliminate the penalty for not entering into the "negotiation". Rather, the MFP becomes the transparent and known price based on a simple formula (recommended in the prior bullet). The MFP becomes the maximum price that drug companies can offer Part D plans for placement on formulary in Medicare Part D plans 13 years after the drug's approval and marketing; any price above that would not be acceptable for formulary placement, with the exception retained for multi-source drugs;

- Exempt orphan drugs with multiple indications from the MDNP rather than exempting only orphan drugs with one orphan indication;

- Set the definition of a drug for purposes of the MDNP as an individual NDA or BLA, rather than all drugs of the same moiety grouped together; and

- Hold the number of selected medicines at ten per year for the MDNP until a sufficient number of years have passed to assess the implications to clinical development.

The Medicare Part D drug program has successfully controlled costs for some of the widely used medicines through formulary, net price agreements, and generic and biosimilar utilization. Congress and the administration should consider approaches to support a competitive environment and use value-based payments more as the IRA is implemented. Specifically:

- Select drugs for the MDNP based on net sales after discounts, not gross sales before rebates;

- Exempt drugs from the MDNP where the competitively established discounts and rebates are already reducing the drug price to a certain percentage below the non-Federal Average Manufacturer Price (eg. 80% or lower of non-FAMP); and

- Exempt drugs from the MDNP that meet a certain threshold percentage of their prescriptions are involved in value-based payment performance contracts with Medicare drug plans that are designed to demonstrate clinical or patient benefit in Part D plans.

As government price setting and Part D redesign are implemented, the administration and Congress should undertake efforts that will protect the Medicare Part D program, particularly beneficiary access to medicines and affordable plan options. This could include implementing stronger oversight (e.g. through standards and procedures) of Medicare Part D formularies and monitoring changes in Medicare Part D plan options, premiums, and availability of medicines to ensure that beneficiaries have access to the range of clinically appropriate medicines they need.[71] Specifically:

- Ensure that drugs with an MFP are not subject to additional forms of utilization management, such as prior authorization, step therapy, and quantity limits;

- Prohibit Part D plans from placing drugs with an MFP on co-insurance tiers such as specialty tiers or non-preferred brand tiers but rather use a fixed cost-sharing requirement; and

- Monitor plan exits and access carefully. Identify approaches for beneficiaries to have options to multiple Part D drug plans in areas of the U.S. with limited options. Identify structural reforms to support the market rather than short-term subsidies.

CMS was given instructions in the IRA to set prices in the MDNP using variables and evidence that are a measure of value or instructive to patient care. The administration and Congress should eliminate the MDNP process, as described above. The effort and money should instead focus on advancing the development of evidence that provides useful information to patients, doctors, health system

administrators, health insurers, and researchers about the value of medicine in distinct patient types and disease states including adherence, therapeutic switching and health outcomes.

No value assessment is accurate or entirely lacking bias, having multiple credible sources of information demonstrating value, or lack of value, in different populations using distinct approaches provides greater insight. Shifting the complex process of setting the MDNP with sham value assessment out of the federal government and replacing the maximum fair price with a simple formula would free up resources for this effort. Reforms to this process should prioritize making data available to more researchers to examine the value of medicines, to challenge their costs and benefits, and to consider how they work in distinct populations, particularly people often underserved by the U.S. health system. Specifically:

- Re-allocate a sizeable amount of funding from the MDNP to enact the complex price setting instead to qualified researchers for analysis of the value of medicines on clinical and real world data, but outside of the federal government. This information should be developed and shared with the public.
    - This can include a focus on people with high needs who are often underserved by the U.S. health system including people with multiple co-morbid conditions, certain racial and ethnic minorities, women, people living in rural areas, and older people, ensuring the data is coded to reflect those populations; and
- Reprioritize funding to CMS efforts to open up access to Medicare data, with privacy protections to qualified researchers.

Over the next several years, policymakers should prioritize oversight of the implementation to ensure these risks, which can have long-term consequences for patient access and health outcomes, are evaluated and avoided. I thank the committee for the time and the opportunity to share these observations. I look forward to answering your questions.

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