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Which Drug Prices Should Medicare Negotiate? A "Too Little" or "Too Late" Approach

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Americans all along the political spectrum favor allowing Medicare to negotiate the prices it pays for prescription drugs.[1] In September, House Speaker Nancy Pelosi (D-CA) introduced what is now called the Elijah E. Cummings Lower Drug Costs Now Act of 2019 (H.R. 3), and the bill would have Medicare do just that.[2]

Although there are draft pieces of legislation and regulation that take aim at the rising cost of drugs, H.R. 3 is the legislative tip of the spear for price negotiation. If it became law, Medicare would target drugs that claim the largest share of the health care budget and that face limited competition from generics or biosimilars. I propose an alternative set of drugs for price negotiation: those that have too little evidence to support full approval or are too late in their life cycle to justify continued high prices.

My approach may identify some of the same drugs for price negotiation as the ones described in H.R. 3, but the rationale differs. "Too little" and "too late" drugs are those with monopolies that are unjustified by the current incentive framework for innovation, which has three phases. First, a corporation must spend money to prove that its product is safe and effective. Then the corporation is granted a limited period of market exclusivity. Finally, competition enters the market and prices and revenues for the original product fall.

If the pharmaceutical industry opposes H.R. 3 because negotiating down the prices of drugs undermines incentives for innovation, that argument is less compelling for drugs that fall into the too-little and too-late categories.

On the too-little front, the Food and Drug Administration (FDA) grants full approval for drugs when there are convincing data for their safety and efficacy, but it also allows some drugs on the market conditionally on the basis of data indicating that they improve a surrogate indicator of patient benefit, even if there are no data suggesting that they improve clinical outcomes. Despite the conditional nature of approval for drugs entering the market through this accelerated approval pathway, pharmaceutical firms currently charge the same high prices that fully approved drugs capture. Two examples: Lartruvo (olaratumab), an anticancer drug, launched at $17,176 per month in 2016. Exondys 51 (eteplirsen), for patients with Duchenne's muscular dystrophy, launched at an average of $1 million per year per patient in 2016.

Medicare's inability to negotiate prices during the period of conditional approval is detrimental for two reasons. First, required follow-up studies somewhat routinely show that the treatment deserved no reward whatsoever. Lartruvo's negative follow-up trial led to its withdrawal from the U.S. market, but its maker first banked $400 million in U.S. revenues.[3] (Of 198 indications granted accelerated approval since 1992, a total of 115 have ultimately gained full approval, whereas 67 have not and 16 others have been withdrawn.) Second, the innovation incentive is meant to encourage the completion of a drug's development and testing. If the reward is given too early in the process, the incentive dissolves. Required studies of Exondys 51, for example, are 3 years behind schedule.[3]

For many drugs, the FDA has granted conditional approval for some indications and full approval for others, but varying a product's prices according to indication is challenging.[4] To make

selective price negotiation work, Medicare would have to focus on drugs that are on the market solely under accelerated approval.

As for the too-late category, market exclusivity is intended to be time limited, and policymakers adjust the duration of exclusivity protection to modulate the incentives for developing certain categories of treatments. Traditional small-molecule drugs receive a guaranteed 5 years of FDA monopoly protection, though for these drugs composition-of-matter patents typically outlast the 5 years. Longer exclusivity periods are granted to drugs for orphan diseases, drugs for use in children, and some antibiotics. In other words, the duration of FDA exclusivity is one of policymakers' primary levers for setting the size of the reward pharmaceutical firms will receive after drug approval.

But pharmaceutical corporations have found many ways to extend their monopolies, whether by creating "thickets" of overlapping patents, refusing to provide samples to competitors, or paying other companies to delay market entry of generics or biosimilars. These tactics can easily result in a monopoly period twice as long as what policymakers intended. Although several legislative efforts target these strategies, negotiation over the prices of drugs that are past their FDA exclusivity period would directly address the financial ramifications of these delays.

I conducted an informal analysis to determine the potential magnitude of savings available through price negotiation for drugs in the too-little and too-late categories (details are provided in the Supplementary Appendix, available at NEJM.org). I focused on the top 10 sellers in each category according to their projected total 2019 U.S. revenues (see table). I assumed that prices would be negotiated down to the level currently paid in the United Kingdom for each product. The United Kingdom is one of the six countries listed in the speaker's bill, which would prohibit Medi-

Projected Savings Achievable by Negotiation among the Top 10 "Too Little" and "Too Late" Drugs in 2019.*

Drug	Price per Package (U.S./U.K.)	Projected 2019 U.S. Revenues	Potential 2019 U.S. Savings
	$	*millions of $*	
Too Little			
Fabrazyme (agalsidase beta)	6,023/2,711	520	286
Exondys 51 (eteplirsen)	8,000/NA	365	208
Northera (droxidopa)	7,782/NA	310	177
Ocaliva (obeticholic acid)	6,587/2,942	182	101
Arikayce (amikacin liposome)	10,977/NA	100	57
Calquence (acalabrutinib)	14,064/NA	80	46
Alunbrig (brigatinib)	15,964/6,048	50	31
Vitrakvi (larotrectinib)	14,577/6,172	27	16
Lorbrena (lorlatinib)	16,055/6,521	25	15
Folotyn (pralatrexate)	5,406/NA	24	14
Subtotal			949
Too Late			
Humira (adalimumab)	3,363/869	13,057	9,683
Enbrel (etanercept)	3,461/882	4,568	3,403
Rituxan (rituximab)	4,479/1,077	3,850	2,924
Neulasta (pegfilgrastim)	4,271/847	3,073	2,464
Remicade (infliximab)	612/517	2,998	464
Avastin (bevacizumab)	3,067/1,141	2,891	1,815
Herceptin (trastuzumab)	1,513/502	2,558	1,708
Lyrica (pregabalin)	394/119	2,100	1,466
Xolair (omalizumab)	1,048/316	2,021	1,412
Lantus (insulin glargine)	74/46	1,556	579
Subtotal			25,917

* U.S. prices are the average sales prices for Medicare Part B drugs, if available, the net-adjusted prices for Part D drugs, and the wholesale average acquisition costs for accelerated approval drugs. U.K. prices are from the British National Formulary, NHS Specialist Pharmacy Service (converted to dollars at the September 10, 2019, rate of 1 British pound equal to 1.23442 U.S. dollars). U.S. revenues are 2019 U.S. consensus estimates (from Bloomberg and analyst reports, July 2019), if available; otherwise, revenues are estimated on the basis of global consensus estimates with global–U.S. revenue spread from the closest year available or a conservative 50% spread applied to estimate U.S. projections. For cases in which the drug price is not available in the United Kingdom, 57% U.S. savings are assumed. NA denotes not available, Too Late drugs that are past their FDA exclusivity period, and Too Little drugs that have been approved only through an accelerated approval pathway.

care from paying more than 1.2 times the average of their prices.

My calculations use the average price in the United States today, which comes from several sources. The average sales price from the first quarter of 2019 was used for Medicare medical benefit (Part B) drugs except Exondys 51. Net prices for drugs that are past their FDA exclusivity period were estimated by adjusting the wholesale acquisition cost from August 2019 by the estimated gross-to-net discount reported by the prescription-drug–pricing analyst firm SSR Health for the second quarter of 2019. The unadjusted wholesale acquisition cost for August 2019 was used for Exondys 51 and for prescription drugs with only accelerated approval. The U.K. prices came from the British National Formulary or National Health Service Specialist Pharmacy Service data for 2019. When a U.K. price for the drug was unavailable, I applied the average discount between U.S. and U.K. prices across available drugs, which is 57%.[5]

Negotiating prices of 10 too-little drugs and 10 too-late drugs to levels currently paid in the United Kingdom would produce about $26.8 billion in savings in 2019 alone, most of which ($25.9 billion) would come from savings on drugs in the latter category. Over time, the drugs included could change. For instance, in 2020 this category might include Revlimid (lenalidomide), which generated $6.5 billion in 2018 U.S. sales; its price in the United Kingdom is 32% of that in the United States. The extent to which the resulting savings would accrue to the Medicare program or, alternatively, reduce commercial insurance premiums or patient out-of-pocket costs is uncertain. For perspective on this 1-year savings estimate, a recently introduced bill from the Senate Finance Committee that aims to lower drug prices is projected to save Medicare $130 billion over 10 years. The speaker's bill is projected to save Medicare $340 billion over that period.

Medicare negotiation of prescription-drug prices would bring U.S. government policies in line with those of other high-income countries, and the idea is popular with both the public and policy analysts. But it would represent a sea change for pharmaceutical firms, which will maintain that any threat to their pricing power will slow innovation. It is difficult to counter their argument, in part because the available rewards for successful innovation do lure investment capital into the biopharmaceutical sector. Thus, changes to prices for any product could affect the pace of drug development.

Today, it is unclear how large the rewards need to be for drug development to proceed efficiently or how well those rewards need to align with a drug's benefits. Nevertheless, policymakers have constructed a system that enables successful pharmaceutical innovators to charge monopoly prices; they can do so for a duration defined in law, for drugs with full marketing approval. Changing the pricing approach only for drugs that do not meet these criteria would allow Medicare to sidestep some thorny questions, deliver substantial savings, and preserve the current incentive framework for pharmaceutical innovation.

Disclosure forms provided by the author are available at NEJM.org.

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