

1 **Drug Prices Negotiated by Medicare vs US Net Prices and Prices in Other Countries**

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25

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34

35 **Access to Data:** Dr Wouters had full access to all the data in the study and takes
36 responsibility for the integrity of the data and the accuracy of the data analysis.

37

38 **Data Sharing:** All data used to estimate US prices were publicly available, apart from
39 national sales volumes (obtained from IQVIA) and Medicare claims (obtained under a
40 Data Use Agreement); data on foreign drug prices were obtained from IQVIA.

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43

44 **Text:** 650 words

45 The Inflation Reduction Act instructs Medicare to negotiate the prices of top-selling
46 drugs, and sets statutory upper limits (“ceilings”) on negotiated prices.¹ Medicare can
47 negotiate prices below the ceilings based on how the prices and clinical benefits of these
48 drugs compare to those of therapeutic alternatives.¹ In August 2024, Medicare
49 published the negotiated prices for the first 10 drugs selected for negotiation;² these
50 prices will come into effect in 2026 and will apply to all Medicare Part D plans. We
51 analyzed how the negotiated prices compared to net prices prior to negotiation, ceiling
52 prices, and list prices in 6 other high-income countries.

53

54 **Methods**

55

56 We identified negotiated prices using a published list from the Centers for Medicare and
57 Medicaid Services.² We estimated 2021 net prices (ie, prices prior to negotiation after
58 discounts) as the difference between the mean Medicare reimbursement per unit and
59 discounts negotiated between manufacturers and insurers (eMethods in the
60 **Supplement**).³ We estimated ceiling prices as the lower of (1) net prices or (2) 25%
61 reduction to the non-federal average manufacturer price (40% reduction for drugs on
62 the market for 17 years or longer) (eMethods in the **Supplement**).¹ We extracted list
63 prices in the foreign countries (ie, Australia, Canada, France, Germany, Switzerland, and
64 United Kingdom) from IQVIA’s MIDAS database, with foreign currencies converted to US
65 dollars using yearly mean exchange rates.

66

67 Initial net prices, ceiling prices, and prices in the foreign countries were estimated using
68 2021 data, the most recent year with complete data. To allow for comparison, all prices
69 were converted to 30-day equivalents, apart from prices for insulin aspart (cost per 100

70 international units) and ibrutinib (weighted cost per tablet / capsule across all
71 formulations available in individual countries) (eMethods in the **Supplement**).

72

73 We calculated the percent difference between the net and negotiated prices in the US,
74 and the mean ratio of foreign prices to negotiated prices. This study was exempted from
75 institutional review board approval as no data were collected from human participants.

76 We followed the STROBE guideline. Data were analyzed using R, version 4.3.1.

77

78 **Results**

79

80 Negotiated prices were 8% (dapagliflozin) to 42% (sitagliptin) lower than net prices
81 prior to negotiation (**Table**). For example, the price of dapagliflozin dropped from
82 \$193.8 to \$178.5 per 30-day supply, while the price of sitagliptin dropped from \$195.6
83 to \$113.0.

84

85 For etanercept, ibrutinib, and ustekinumab, negotiated prices matched the ceilings,
86 which were 33% to 40% lower than estimated net prices (**Figure**). For insulin aspart,
87 the negotiated price was close to the list price of the product after the manufacturer
88 (Novo Nordisk) introduced a price cut in 2024.⁴ For all other products, negotiated prices
89 fell below the ceilings, with ceilings for 5 out of the 6 drugs set at initial net prices.

90

91 Apart from insulin, which had a voluntary price reduction in 2024, all products
92 remained more expensive in the US than other countries (**Table**). For example, the price
93 negotiated by Medicare for ustekinumab (\$4,695.0 per 30-day supply) was higher than

94 prices in other countries, which ranged from \$1,219.9 in France to \$2,504.0 in Germany.
95 However, the gap between US and foreign prices narrowed for all drugs.

96

97 **Discussion**

98

99 Reductions in prices associated with the Medicare Drug Price Negotiation Program
100 differed widely across the 10 drugs. The negotiated prices of all products but one
101 remained above list prices in peer countries. Study limitations include a lack of data on
102 net prices in peer countries and the use of indirect methods to estimate net prices
103 before negotiation (for which we relied on estimates of mean discounts across Medicare
104 Part D and commercial markets).

105

106 The Centers for Medicare and Medicaid Services estimated that, if negotiated prices had
107 been implemented in 2023, net spending would have been reduced by 22%.² This figure
108 is likely an overestimate of savings associated with negotiation because manufacturers
109 will not have to pay mandatory discounts to Medicare Part D for drugs selected for
110 negotiation (which will instead be paid by the Centers for Medicare and Medicaid
111 Services). Further research that accounts for these forgone discounts is needed to
112 accurately estimate savings associated with the negotiation program.

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139 **Table.** Comparison of treatment costs based on prices negotiated by Medicare vs. costs in 6 other countries (all amounts in US\$).

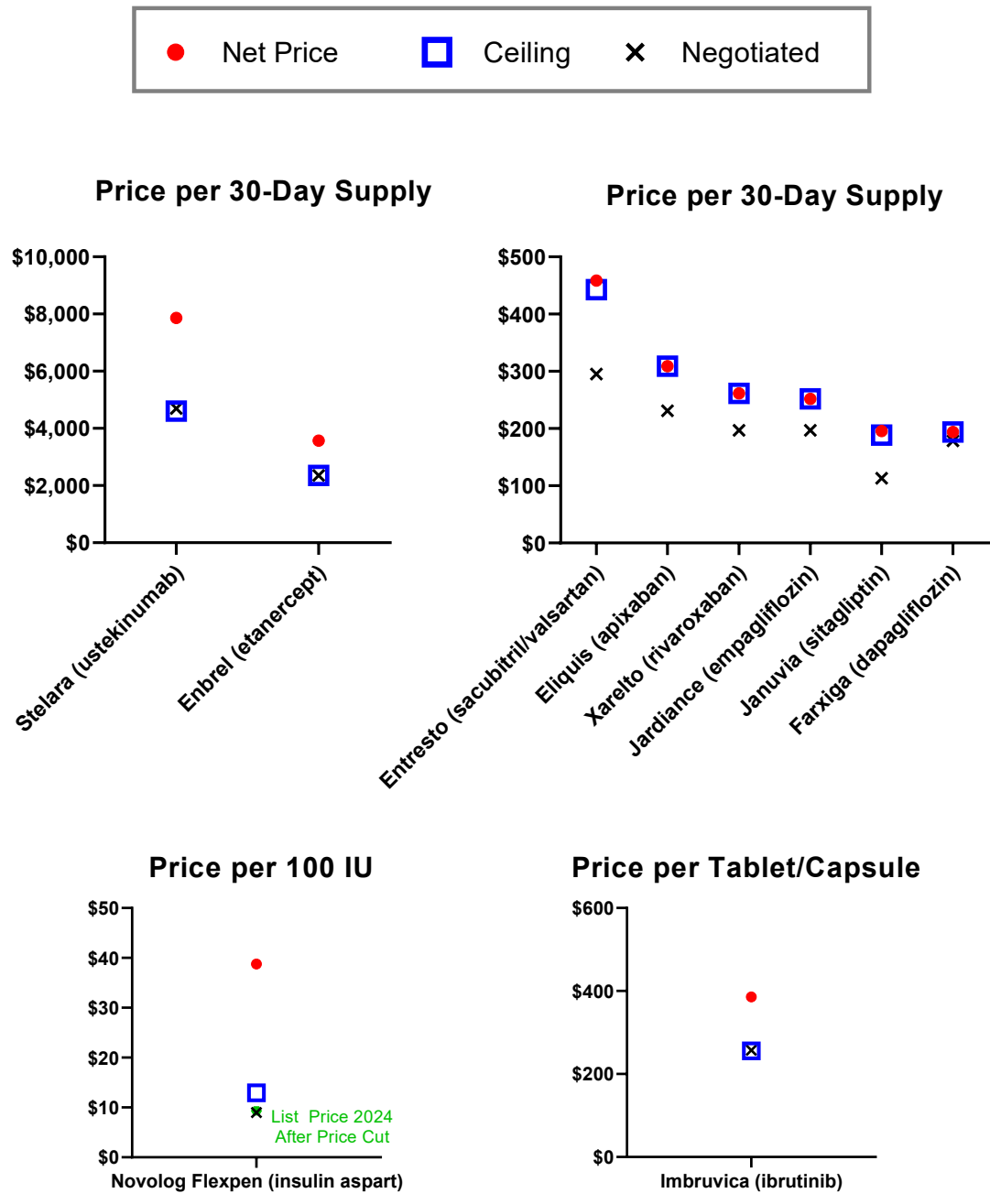
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Brand Name	Active Ingredient	Primary Indication	United States			Australia	Canada	France	Germany	Switzerland	United Kingdom	Mean Ratio of Foreign to Initial Net Price	Mean Ratio of Foreign to Negotiated Price
			Initial Net Price	Negotiated Price	% difference								
Stelara	Ustekinumab	Crohn's disease, psoriasis, psoriatic arthritis, and ulcerative colitis	7,859.9	4,695.0	-40%	1341.6	1813.1	1219.9	2504.0	1730.0	1291.7	5.1	3.0
Enbrel	Etanercept	Rheumatoid arthritis	3,571.6	2,355.0	-34%	754.4	1135.4	646.5	974.3	1176.5	851.9	4.0	2.7
Entresto	Sacubitril / valsartan	Heart failure	458.4	295.0	-36%	138.9	181.9	156.6	150.4	145.1	117.9	3.1	2.0
Imbruvica *	Ibrutinib	Chronic lymphocytic leukemia	385.7	257.4	-33%	71.2	77.3	82.4	164.8	172.4	148.2	3.7	2.5
Eliquis	Apixaban	Non-valvular atrial fibrillation	309.0	231.0	-25%	57.1	80.4	63.8	68.7	82.2	68.6	4.5	3.3
Xarelto	Rivaroxaban	Non-valvular atrial fibrillation	261.3	197.0	-25%	51.2	70.7	58.7	86.4	86.4	65.0	3.9	2.9
Jardiance	Empagliflozin	Type 2 diabetes	251.7	197.0	-22%	33.5	67.1	38.3	50.6	50.9	47.2	5.5	4.3
Januvia	Sitagliptin	Type 2 diabetes	195.6	113.0	-42%	30.5	75.8	26.4	35.9	43.6	42.9	5.1	3.0
Farxiga	Dapagliflozin	Type 2 diabetes	193.8	178.5	-8%	33.5	64.9	38.6	41.9	48.9	47.1	4.4	4.1
Novolog / Fiasp *	Insulin aspart	Diabetes	13.0	9.0	-31%	5.4	9.9	6.9	11.1	9.6	7.4	1.6	1.1

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142 * All amounts represent 30-day equivalents, except insulin aspart (expressed per 100 international units) and ibrutinib (expressed as weighted average price per
 143 tablet / capsule). Foreign currencies were converted to US dollars using yearly mean exchange rates.

144 **Figure.** Comparison of treatment costs based on prices negotiated by Medicare, initial
 145 net prices, and ceiling prices.
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147
 148
 149 IU indicates international units.
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151 All amounts represent 30-day equivalents, except insulin aspart (expressed per 100 international units)
 152 and ibrutinib (expressed as weighted average price per tablet / capsule). We plotted drugs on separate
 153 panels due to differences in price ranges and units. The manufacturer of insulin aspart (Novolog)
 154 the product's US list price in 2024, which is shown in the figure for comparison.