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MEDICARE FFS PART B AND INTERNATIONAL DRUG PRICES: A COMPARISON OF THE TOP 50 DRUGS

Medicare FFS pays at least twice as much as comparable Organisation for Economic Co-operation and Development (OECD) countries for the top-selling prescription drugs in Part B.

KEY POINTS

- Part B drug spending is increasingly concentrated on certain high-cost drugs. The drugs in this analysis account for nearly 80 percent of the $33 billion in 2018 Part B drug spending. In contrast, claims for these drugs represent only 17 percent of the total number of Part B drug claims.[1]
- Volume-weighted price ratios of Part B payment to prices in other higher-income OECD countries ranged from a low of 1.48 (Japan) to a high of 5.23 (Luxembourg); on average the ratio is 2.05.
- The top-selling Part B drug, aflibercept (brand name Eylea) was 2.03 times as expensive in Part B as in OECD comparison countries.
- Despite lower prices in other countries, most top Part B drugs were available in Germany, France, the United Kingdom, Japan, Italy, Spain, and other high income comparison countries. Such drugs account for at least 90 percent of the analyzed Medicare Part B spending.
- The drugs we analyzed have Medicare Part B payment allowances based on Average Sales Price (ASP). ASP is reported net of most rebates and other discounts from manufacturers. A limitation of the study is that data on off-invoice rebates and other discounts are not available for other countries.

INTRODUCTION

The September 13, 2020 Executive Order on Lowering Drug Prices by Putting America First declared, "It is the policy of the United States that the Medicare program should not pay more for costly Part B or Part D prescription drugs or biological products than the most-favored-nation price."[2] The Most Favored Nation (MFN) Model issued by the Centers for Medicare & Medicaid Services (CMS) proposes such an approach for Medicare Part B.[3] This Issue Brief compares what Medicare pays for prescription drugs in Part B with prices in the other industrialized countries that, like the U.S., are members of the Organisation for Economic Co-operation and Development (OECD).

[1] As measured by the number of claims billed that included a relevant HCPCS code.
[2] https://www.govinfo.gov/content/pkg/FR-2020-09-23/pdf/2020-21129.pdf, p. 59649.
[3] CMS, Most Favored Nation (MFN) Model (https://innovation.cms.gov/initiatives/most-favored-nation-model/).

Medicare pays for beneficiaries' prescription drugs in several different ways. Drugs administered to Fee-for-Service (FFS) beneficiaries during in-patient hospital stays and skilled nursing facilities are covered under Part A; payment for these drugs is typically bundled with payment for the stay, which makes it hard to break out Medicare spending on these drugs from other costs. Drugs administered incident to a physician's service (generally infused or injected, and not self-administered) to FFS beneficiaries in hospital outpatient clinics, physician offices, and other outpatient settings are covered under Part B. The top Part B prescription drug by 2018 spending was aflibercept (Eylea), administered for age-related macular degeneration (AMD) and other ophthalmologic conditions. Beneficiaries enrolled in Medicare Advantage (MA) receive coverage for Part A and Part B drugs as part of their MA plans. And coverage for outpatient prescription drugs received from community pharmacies or by mail is provided under Part D, which includes both Medicare Advantage Prescription Drug plans (MA-PDs) for most beneficiaries enrolled in MA and stand-alone Prescription Drug Plans (PDPs) purchased by many FFS beneficiaries.

Policies related to drug markets and pricing in the U.S. attempt to balance incentives for innovation with affordability and access. The Hatch-Waxman Act codified these objectives by strengthening market exclusivity protections for new drugs while expediting pathways for generic competition once exclusivity periods end. Rather than regulation or negotiation, the U.S. generally depends on the market interactions of private entities such as manufacturers, pharmaceutical benefit managers (PBMs), and private health plans to assure value. For brand-name drugs still protected from generic competition, PBMs and health plans can sometimes use competition among therapeutically similar drugs to negotiate lower prices from manufacturers in exchange for favorable placement on prescription drug formularies. In recent years, FDA has accelerated its approval of generic drugs. Formulary policies such as tiered copayments have encouraged rapid substitution of generic drugs as soon as they are available.

These practices, and their impact on prescription drug spending, differ considerably between drugs provided under Medicare's Part B and Part D. Part D covers a wide range of self-administered drugs generally distributed through community pharmacies or by mail order. Under Part D, private plans sponsors compete with each other for enrollment of Medicare beneficiaries. In general, they can employ a full range of formulary management practices and along with their PBM partners are skilled and experienced at leveraging market advantages in their price negotiations with manufacturers. Part B covers a narrower set of drugs that are generally administered by physicians or other providers. Under Part B, Medicare pays providers, such as hospitals and physicians, who are responsible for purchasing and administering drugs. It is not clear that providers have the same incentives, skills, and/or interest in negotiating price concessions. Cost savings as a result of generic competition with older brand-name products are proportionately small in Part B because biologics, which do not benefit from generic competition, account for a large percentage of Part B drug spending. And while the U.S. market for competing biosimilar versions of brand-name biologics is growing, it remains relatively small compared to biosimilar markets in other countries.[4]

Previous comparisons of U.S. and international drug prices have generally found that the U.S. pays more than other OECD countries.[5] Most of these studies, however, have looked at pricing and utilization for the U.S.

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[4] IQVIA Institute for Human Data Science, Biosimilars in the United States 2020-2024: Competition, Savings, and Sustainability. October 2020 (https://www.iqvia.com/insights/the-iqvia-institute/reports/biosimilars-in-the-united-states-2020-2024).

[5] For examples, see U.S. Department of Commerce, International Trade Administration, "Pharmaceutical Price Controls in OECD Countries: Implications for US Consumers, Pricing, Research and Development and Innovation," 2004; Patricia Danzon and Michael F. Furukawa, "International Prices and Availability of Pharmaceuticals in 2005," *Health Affairs*, Vol. 27, No. 1, January/February 2008; Panos Kanavos, Alessandra Ferrario, Sotiris Vandoros, and Gerard F. Anderson, "Higher US Branded Drug Prices and Spending Compared to Other Countries May Stem Partly from Quick Uptake of New Drugs," *Health Affairs*, Vol. 32, No. 4, April 2013; Dana O. Sarnak, David Squires, and Shawn Bishop, "Paying for Prescription Drugs Around the World: Why Is the U.S. an Outlier?,"

market as a whole, rather than focusing on the prices paid under Medicare for the Medicare market basket (that is, the drugs covered by Medicare, as weighted by their utilization within Medicare). Studies limited to selected countries may not be representative of all industrialized countries.

We compared spending on the Medicare Part B basket of drugs, at Medicare Part B payment levels, from analysis of prescription drug data developed by CMS, with counterfactual spending on the same set of drugs at international drug prices from IQVIA's MIDAS database. We analyzed MIDAS data on prices and utilization in 33 of the 36 countries that were members of the OECD in 2018.[6] MIDAS has also been the data source for most other studies of international drug pricing, as no other data source provides comprehensive information on both prices and utilization. These data, however, represent gross rather than net drug prices as they do not capture rebates, discounts, and other price concessions in either the U.S. or other countries. The sections that follow and Appendix A provide additional information on our data and methods.

Our comparisons are presented for analytic purposes only. Because Medicare prices for some drugs are lower than those in other countries, our results may understate potential savings from policies based on the lower of the applicable international price and the Medicare price that would otherwise apply. Such policies would reduce Medicare drug prices when the current Medicare price was above a price based on international comparisons while leaving price unchanged when the current Medicare price was below the applicable international price, or the drug was unavailable in comparator countries.

This Issue Brief expands the analysis in an earlier ASPE issue brief titled "Comparison of U.S. and International Prices for Top Medicare Part B Drugs by Total Expenditures" (2018).[7] In particular, this Issue Brief expands the list of drugs, expands the countries analyzed, and makes changes to the methodology compared to the previous brief.[8] A comparison of key methodological differences is included in the appendix.

Part B Overview

In Medicare Part B, beneficiaries pay a monthly premium that depends on the beneficiary's income. In 2020, the standard premium was $144.60. This section of the paper focuses on the 33.2 million Medicare beneficiaries enrolled in Part B in Fee-for-Service (FFS) Medicare in 2018, rather than those enrolled in a Medicare Advantage plan. Medicare Part B FFS beneficiaries are responsible for a yearly deductible ($198 in CY 2020) and afterwards are responsible for a copayment up to 20 percent of the cost of a service (this copayment is capped at the inpatient deducible amount for services administered in hospitals). There is no annual cap on out-of-pocket payments, but many beneficiaries enroll in supplemental Medigap insurance

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Commonwealth Fund, October 5, 2017 (https://www.commonwealthfund.org/sites/default/files/documents/___media_files_publications_issue_brief_2017_oct_sarnak_paying_for_rx_ib_v2.pdf); So-Yeon Kang, Michael J. DiStefano, Mariana P. Socal, and Gerard F. Anderson, "Using External Reference Pricing In Medicare Part D To Reduce Drug Price Differentials With Other Countries," *Health Affairs*, vol. 38, No. 5, May 2019; Council of Economic Advisers, "Funding the Global Benefits to Biopharmaceutical Innovation, February 2020 (https://www.whitehouse.gov/wp-content/uploads/2020/02/Funding-the-Global-Benefits-to-Biopharmaceutical-Innovation.pdf); ; Andrew W. Mulcahy, Daniel Schwam, and Nate Edenfield, "Comparing Insulin Prices in the U.S. to Other Countries," RAND Research Report, September 2020 (https://aspe.hhs.gov/system/files/pdf/264056/Comparing-Insulin-Prices.pdf).

[6] We did not have MIDAS data on Denmark, Iceland, or Israel. We did not analyze data on Colombia, which became a member of the OECD on April 28, 2020 (https://www.oecd.org/colombia/colombia-accession-to-the-oecd.htm).

[7] https://aspe.hhs.gov/pdf-report/comparison-us-and-international-prices-top-medicare-part-b-drugs-total-expenditures

[8] The 2018 Issue brief analyzed 27 drugs across 14 countries based on a combination of the countries in the G7 and countries considered to be in Germany's reference basket.

plans that cover some of the beneficiary's out-of-pocket payments. In addition, individuals enrolled in Medicaid may have Medicaid cover their Part B premiums and their Part B out-of-pocket costs.

Medicare Part B covers certain categories of drugs: drugs furnished incident to a physician's service (e.g., injectable drugs used in connection with the treatment of cancer), drugs explicitly covered by statute (e.g., some vaccines and oral anticancer drugs), and drugs used in conjunction with durable medical equipment (e.g., inhalation drugs). Medicare beneficiaries can receive Part B-covered drugs in several settings, including physician offices and hospital outpatient departments (HOPDs). Medicare directly pays providers and suppliers for these drugs.[9]

This Issue Brief focuses on Part B drugs that are paid under the ASP system. A product's ASP is calculated based on actual sales minus most price concessions (such as volume discounts, prompt pay discounts, cash discounts, free goods, chargebacks, and rebates). Certain sales and discounts to government programs are excluded from the ASP calculations. When ASP information is not available, Medicare Part B pays for drugs based on their Wholesale Acquisition Cost (WAC). The relevant ASP is calculated at the Healthcare Common Procedure Coding System (HCPCS) code level, which may combine several formulations, dosage strengths, and manufacturers of products together. For this reason, our comparisons are at the HCPCS code level.

Under the ASP framework, providers purchase drug products from manufacturers, often through the use of wholesalers and group purchasing organizations (GPOs). Medicare then pays the statutory amount to the providers after they administer Part B drugs to beneficiaries and submit claims. The payment amount is based on the ASP plus 6 percent (effectively reduced to 4.3 percent under sequestration). In some cases, Medicare Part B may pay a provider for billed services related to the administration of the product.

Although ASP reflects rebates negotiated by private insurance companies, the ASP system itself may suppress the magnitude of rebates. Unlike Medicare Part B, private insurers may establish formularies. These plans may negotiate rebates with manufacturers for preferred placement on the formulary. However, for many of the drug products administered under Part B, Part B accounts for more sales than all other U.S. payers combined.[10] This may reduce the willingness of a manufacturer to negotiate with an insurer because it would impact the price of the larger Medicare Part B market.

The ASP system was supposed to encourage providers to purchase and administer the Medicare Part B drug for which they negotiated a better deal. Since the provider is both the purchaser of the drug product and the one that prescribes and administers the product, the provider should have the incentive to purchase a product with the largest difference between his or her purchase price and ASP when there are multiple competing products on the market. The providers would make more money because there is a lag (generally six months) between the purchase and when Medicare Part B uses the manufacturer's report of that purchase to calculate ASP. The hope is that ASP will slowly chase these discounts. Yet elements of the ASP system may actually encourage the use of higher cost drugs instead. Since in most cases Medicare Part B pays providers an add-on that is a percentage of ASP, the add-on is larger when a drug is more expensive. Financial incentives for providers are a complex interaction between the amounts a provider can make based off the difference

[9] For more information, see Nguyen N and Sheingold S. Medicare Part B Drugs: Trends in Spending and Utilization, 2006-2017. Washington, DC: Office of the Assistant Secretary for Planning and Evaluation, U.S. Department of Health and Human Services. November 20, 2020.

[10] Government Accountability Office. "Medicare Part B: Medicare Represented at Least Half of the Market for 22 of the 84 Most Expensive Drugs in 2015," 2017 (https://www.gao.gov/products/GAO-18-83).

between their negotiated price and ASP and the higher add-on they would receive for more expensive products.

Finally, the two mechanisms interact to encourage new drugs to launch at high prices. A new drug has the incentive to launch at a high price because it ensures that the add-on payment will be larger and the high price gives the manufacturer more room to negotiate discounts. A limit on a manufacturer's ability to set high prices is the 20 percent patient coinsurance, which is less of an issue for Medicare beneficiaries enrolled in Medicare supplemental plans.[11]

Data and Methods

We examined the top 50 drugs in Part B by spending excluding vaccines, blood factors, drugs used to treat End-Stage Renal Disease (ESRD), radiopharmaceuticals, and drugs administered at home.[12] Since Part B pays by the billing unit for HCPCS codes, we constructed HCPCS code equivalents in international countries. We matched drugs at the active ingredient, or "molecule" level and analyzed each formulation[13] to convert from the IQVIA MIDAS Standard Units to HCPCS code billing units. We divided the sum of the sales by the sum of the billing units across all of the comparator countries to get a non-U.S. OECD volume-weighted average price and within each country to get the country prices. Since there is a possibility that this approach captured other HCPCS codes with the same active ingredient, we included additional HCPCS codes with the same IQVIA molecule and the same billing unit in our analysis. Table 1 below shows the HCPCS codes included in this analysis.

[11] The Kaiser Family Foundation reported that in 2016 6.1 million Medicare FFS enrollees (19 percent) did not have supplemental coverage from Medigap, employer-sponsored insurance, Medicaid, or other coverage. Juliette Cubanski, Anthony Damico, Tricia Neuman, and Gretchen Jacobson, *Sources of Supplemental Coverage among Medicare Beneficiaries in 2016*, Kaiser Family Foundation, November 28, 2018 (https://www.kff.org/medicare/issue-brief/sources-of-supplemental-coverage-among-medicare-beneficiaries-in-2016/).

[12] These exclusions were made before the drugs were selected. Some of those exclusions were not relevant when constructing the drug list. The most relevant exclusions were for vaccines. Part B spending totals include physician add-on payments.

[13] Molecule refers to the IQVIA description of the nonproprietary name for the pharmaceutical or biological substance within a drug product. Formulations are represented by the product, dosage form, strength, and volume of each observation.

Table 1. Part B Spending and Volume by included HCPCS Code, 2018

HCPCS Code	Brand Name	Nonproprietary Name	Total Spending	Total Billing Units	Total Claims	Average Spending per Billing Unit	Share of Drug Spending	Share of Drug Claims
J0129	Orencia	Abatacept	$799,286,087	16,664,951	219,711	$47.96	2.4%	0.3%
J0178	Eylea	Aflibercept	$2,573,938,387	2,730,001	1,228,011	$942.83	7.7%	1.8%
J0585	Botox	Onabotulinumtoxina	$348,391,516	60,268,382	326,397	$5.78	1.0%	0.5%
J0717	Cimzia	Certolizumab Pegol	$366,371,065	47,813,843	123,583	$7.66	1.1%	0.2%
J0881	Aranesp	Darbepoetin Alfa In Polysorbat	$241,282,506	69,203,868	293,395	$3.49	0.7%	0.4%
J0885	Epogen	Epoetin Alfa	$252,105,038	21,147,793	565,506	$11.92	0.8%	0.8%
J0897	Prolia	Denosumab	$1,416,968,973	84,040,684	1,078,076	$16.86	4.3%	1.6%
J1300	Soliris	Eculizumab	$395,796,137	1,980,607	16,063	$199.84	1.2%	0.0%
J1439	Injectafer	Ferric Carboxymaltose	$140,612,426	145,773,931	179,302	$0.96	0.4%	0.3%
J1459	Privigen	Immun Glob G(Igg)/Pro/Iga 0-50	$274,360,293	8,076,079	90,836	$33.97	0.8%	0.1%
J1556	Bivigam	Immun Glob G(Igg)/Gly/Iga Ov50	$341,057	5,936	138	$57.46	0.0%	0.0%
J1557	Gammaplex	Immun Glob G(Igg)/Gly/Iga 0-50	$19,208,545	406,976	5,820	$47.20	0.1%	0.0%
J1561	Gammaked	Immune Globul G/Gly/Iga Avg 46	$370,456,943	10,263,798	113,101	$36.09	1.1%	0.2%
J1568	Octagam	Immun Globg(Igg)/Malt/Iga Ov50	$171,666,328	4,874,034	63,435	$35.22	0.5%	0.1%
J1569	Gammagard Liquid	Immun Glob G(Igg)/Gly/Iga Ov50	$378,891,063	9,924,923	121,151	$38.18	1.1%	0.2%

HCPCS Code	Brand Name	Nonproprietary Name	Total Spending	Total Billing Units	Total Claims	Average Spending per Billing Unit	Share of Drug Spending	Share of Drug Claims
J1602	Simponi Aria	Golimumab	$296,770,201	12,923,945	72,688	$22.96	0.9%	0.1%
J1745	Remicade	Infliximab	$1,149,653,207	14,999,597	296,606	$76.65	3.5%	0.4%
J1930	Somatuline Depot	Lanreotide Acetate	$207,099,486	3,893,711	32,564	$53.19	0.6%	0.0%
J2182	Nucala	Mepolizumab	$118,484,558	4,078,216	39,948	$29.05	0.4%	0.1%
J2323	Tysabri	Natalizumab	$234,996,475	13,753,667	46,114	$17.09	0.7%	0.1%
J2350	Ocrevus	Ocrelizumab	$488,832,130	8,851,591	18,758	$55.23	1.5%	0.0%
J2353	Sandostatin Lar Depot	Octreotide Acetate, mi-Spheres	$414,142,370	2,386,122	81,407	$173.56	1.2%	0.1%
J2357	Xolair	Omalizumab	$395,083,351	12,081,242	181,075	$32.70	1.2%	0.3%
J2469	Aloxi	Palonosetron HCL	$135,249,837	7,400,830	685,952	$18.27	0.4%	1.0%
J2505	Neulasta	Pegfilgrastim	$1,370,995,237	331,288	315,559	$4,138.38	4.1%	0.5%
J2778	Lucentis	Ranibizumab	$1,215,701,656	3,300,831	618,921	$368.30	3.6%	0.9%
J2785	Lexiscan	Regadenoson	$130,749,115	2,355,275	600,378	$55.51	0.4%	0.9%
J2796	NPlate	Romiplostim	$216,603,978	3,419,867	76,279	$63.34	0.7%	0.1%
J3262	Actemra	Tocilizumab	$229,831,522	52,777,319	96,092	$4.35	0.7%	0.1%
J3357	Stelara	Ustekinumab	$153,223,417	933,938	13,506	$164.06	0.5%	0.0%
J3380	Entyvio	Vedolizumab	$243,007,131	14,114,303	46,859	$17.22	0.7%	0.1%
J7325	Synvisc	Hylan G-F 20	$107,171,714	9,184,760	211,771	$11.67	0.3%	0.3%
J9022	Tecentriq	Atezolizumab	$240,758,212	3,234,972	25,775	$74.42	0.7%	0.0%
J9033	Treanda	Bendamustine HCL	$44,821,632	1,632,298	8,697	$27.46	0.1%	0.0%
J9034	Bendeka	Bendamustine HCL	$233,169,546	10,025,046	55,439	$23.26	0.7%	0.1%

HCPCS Code	Brand Name	Nonproprietary Name	Total Spending	Total Billing Units	Total Claims	Average Spending per Billing Unit	Share of Drug Spending	Share of Drug Claims
J9035	Avastin	Bevacizumab	$1,011,988,293	14,351,978	962,028	$70.51	3.0%	1.4%
J9041	Velcade	Bortezomib	$443,373,929	10,466,991	273,372	$42.36	1.3%	0.4%
J9042	Adcetris	Brentuximab Vedotin	$117,142,528	904,406	6,629	$129.52	0.4%	0.0%
J9047	Kyprolis	Carfilzomib	$248,150,983	7,918,465	94,992	$31.34	0.7%	0.1%
J9055	Erbitux	Cetuximab	$182,346,364	3,394,946	50,555	$53.71	0.5%	0.1%
J9145	Darzalex	Daratumumab	$645,375,454	12,932,359	93,805	$49.90	1.9%	0.1%
J9217	Eligard	Leuprolide Acetate	$271,873,374	1,327,853	361,480	$204.75	0.8%	0.5%
J9228	Yervoy	Ipilimumab	$269,500,417	2,063,100	11,502	$130.63	0.8%	0.0%
J9264	Abraxane	Paclitaxel Protein-Bound	$266,320,982	26,171,202	107,894	$10.18	0.8%	0.2%
J9267	Paclitaxel	Paclitaxel	$2,530,697	20,802,553	139,763	$0.12	0.0%	0.2%
J9271	Keytruda	Pembrolizumab	$1,813,727,267	41,818,943	201,492	$43.37	5.4%	0.3%
J9299	Opdivo	Nivolumab	$1,715,907,188	69,929,329	239,434	$24.54	5.2%	0.4%
J9305	Alimta	Pemetrexed Disodium	$471,369,648	7,818,586	83,648	$60.29	1.4%	0.1%
J9306	Perjeta	Pertuzumab	$269,991,282	25,713,562	54,325	$10.50	0.8%	0.1%
J9310*	Rituxan	Rituximab	$1,699,302,442	2,091,194	249,835	$812.60	5.1%	0.4%
J9354	Kadcyla	Ado-Trastuzumab Emtansine	$113,562,037	4,160,587	15,273	$27.29	0.3%	0.0%
J9355	Herceptin	Trastuzumab	$821,766,302	8,892,366	187,595	$92.41	2.5%	0.3%
J9395	Faslodex	Fulvestrant	$249,195,364	2,835,416	141,339	$87.89	0.7%	0.2%
Q2043	Provenge	Sipuleucel-T/Lactated Ringers	$188,526,961	4,785	4,661	$39,399.57	0.6%	0.0%
Q5103	Inflectra	Infliximab-Dyyb	$65,048,865	1,021,568	21,514	$63.68	0.2%	0.0%

HCPCS Code	Brand Name	Nonproprietary Name	Total Spending	Total Billing Units	Total Claims	Average Spending per Billing Unit	Share of Drug Spending	Share of Drug Claims
Q5104	Renflexis	Infliximab-Abda	$6,527,098	98,817	2,086	$66.05	0.0%	0.0%
Q5106	Retacrit	Epoetin Alfa-Epbx	$261,028	23,067	581	$11.32	0.0%	0.0%
Included Drug Subtotal			*$26,249,809,638*	*929,596,697*	*11,252,716*		*78.8%*	*16.9%*
Part B Program Total			$33,310,086,674	2,997,284,947	66,566,115		100.0%	100.0%

* Rituximab was assigned a new J-code, J9312, effective in 2019.

Source: CMS Medicare Part B Drug Spending Dashboard. Data on drugs with fewer than 11 claims are not included in the Dashboard to protect patient confidentiality and spending on such drugs is not included in the Part B Program Total shown in the table.

Part B drug spending is increasingly concentrated on certain high cost drugs.[14] Table 1 shows that the included drugs account for nearly 80 percent of the $33 billion in Part B drug spending. In contrast, claims for these drugs represent only 17 percent of the Part B drug claims.[15]

Limitations

Comparisons of drug prices between the U.S. and other countries are difficult. This can be especially true for the injectable and infusion products that we are analyzing. These products can often have different package sizes with various amounts of overfill (amounts of unused drugs or biologics that are appropriately discarded) in different markets. While we have attempted to use the same methodology used to calculate HCPCS billing units for different packages in the U.S., the method may overstate the number of billing units that would actually be administered from a particular package since we round up to the nearest whole billing unit per package. Conducting this analysis required several steps and we had to make several adjustments and edits to the IQVIA MIDAS data.

Moreover, this analysis is limited by the number of drugs included in the sample. While the top 50 drugs account for nearly 80 percent of the Part B drug spending, we did not match the remaining 20 percent of spending. The additional drugs would include vaccines, products administered using DME, blood factors, drugs used in the treatment of ESRD, radiopharmaceuticals, and many products that have generic versions available. It is likely that the pricing dynamics for these subsets of drugs are different than for the drugs we analyzed. As such the results for these 50 drugs should not be generalized with regard to the remaining Part B drugs.

Finally, our analysis does not include the potential for rebates and other off-invoice discounts in other countries.[16] Medicare Part B payment for all of the drugs we analyzed is based on ASP. ASP is reported net of rebates, discounts, and incentives besides those given to the federal government purchasers (such as the Veterans Health Administration), 340B hospitals and other covered entities[17], Medicare Part D plans, and Medicaid. Meanwhile, the MIDAS data for other countries are based on transaction prices. Other countries likely have additional rebates for these products. Many of the products analyzed in this section are administered through the "hospital" sector in other countries. Many countries have strict budget caps for hospital spending that impact hospital drugs. In some cases this discourages the use of expensive drugs, but in other cases countries ask for yearly rebates from drug manufacturers to keep hospital spending within the pre-defined budget. *As noted above, data on rebates and other off-invoice discounts were not available for other countries.*

[14] Nguyen N and Sheingold S. Medicare Part B Drugs: Trends in Spending and Utilization, 2006-2017. Washington, DC: Office of the Assistant Secretary for Planning and Evaluation, U.S. Department of Health and Human Services. November 20, 2020.

[15] As measured by the number of claims billed that included a relevant HCPCS code.

16 Ulf Persson and Bengt Jonsson, "The End of the International Reference Pricing System?" *Applied Health Economics and Health Policy*, Vol. 14, No. 1, February 2016.

[17] 340B is a federal program that allows covered entities to purchase drugs at reduced prices.

Findings

Availability of Drugs Across Countries

Availability of the included drugs varies widely across countries, although higher-income OECD countries[18] were more likely to have a high degree of comparable availability. In addition, our analysis excluded low-volume and low sales observations from the analysis.[19] Table 2 shows the proportion of drugs available in each country, as measured by the percentage of included U.S. HCPCS code spending that could be matched for that country, taking into account the low-volume and low-sales exclusions. Appendix B shows which drugs are matched in each country. Luxembourg and Estonia had the lowest percent matches in the MIDAS data at 5.4 percent and 0.9 percent of Medicare Part B spending on the analyzed drugs respectively.[20] Meanwhile, Belgium, France, Germany, Italy, Japan, Spain, Turkey, and the United Kingdom all had more than 90 percent of the included drug spending match to drugs sold in those countries.

Despite their lower prices,

Germany, France, the United Kingdom, Italy, Spain, and Japan ***had similar drug availability: more than 90% of the U.S. included drug spending matched to drugs sold in those countries***

Table 2. Percent of U.S. Drug Spending on included Part B HCPCS Codes Matched by Country

Country	Percentage of Included HCPCS Code Spending Available
Australia*	82.4%
Austria*	84.8%
Belgium*	91.3%
Canada*	86.9%
Chile	9.1%
Czechia	74.9%
Estonia	0.9%
Finland*	67.0%
France*	96.0%
Germany*	99.2%

[18] Higher-income OECD countries include those countries with GDP per capita adjusted for purchasing power parity above 60% of the U.S GDP per capita.

[19] We excluded observations with less than 1,000 units in volume and $1,000 in sales. Such an exclusion removes some observations that were outliers and may not be reflective of the prices of these drugs if sold in larger quantities or removes drugs that are not routinely offered for sale in the country. On the other hand, it may result in under matching of drugs for certain countries with smaller populations.

[20] There are a number of potential explanations for these low match rates. First, the countries are missing several drugs because of the low-volume and low-sales exclusions (see methods in appendix of details) applied in other countries. Secondly, IQVIA notes that some countries do not include a hospital panel or ASPE's access to the hospital panel may be restricted by IQVIA based on data-use agreements.

Country	Percentage of Included HCPCS Code Spending Available
Greece	9.8%
Hungary	73.3%
Ireland*	75.8%
Italy*	94.5%
Japan*	94.5%
Korea*	84.8%
Latvia	8.9%
Lithuania	21.2%
Luxembourg*	5.4%
Mexico	32.2%
Netherlands*	33.6%
New Zealand*	33.0%
Norway*	78.6%
Poland	82.4%
Portugal	82.7%
Slovakia	61.0%
Slovenia	59.4%
Spain*	96.3%
Sweden*	84.4%
Switzerland*	84.3%
Turkey	94.0%
United Kingdom*	95.4%
Country Minimum	0.9%
Country Maximum	99.2%
Non-U.S. OECD Average (32 countries)	99.2%
Non-U.S. OECD Average (19 countries)	99.2%

Notes: Country Minimum shown in blue. Country Maximum shown in orange.
* Gross Domestic Product per capita (adjusted for purchasing power) is at least 60 percent of U.S..
Source: IQVIA MIDAS (Data Extracted on July 29, 2019) & CMS Medicare Part B Drug Spending Dashboard

International Price Ratios: Comparing the U.S. to Other OECD countries

Table 3 shows volume-weighted price ratios of Part B average spending (excluding physician add-ons) to prices in all 32 OECD comparison countries combined overall and by drug. Overall, Part B pays 2.11 times the non-U.S. OECD average price for the included drugs and 2.05 times the average for the nineteen OECD higher-income countries (per capita GDP, adjusted for purchasing power, 60 percent or more of U.S. GDP per capita) for which we had IQVIA MIDAS data.

Table 3. Non-U.S. OECD Average and Higher Income Non-U.S. OECD Average Price Ratios by Product

HCPCS Code	Brand Name	Nonproprietary Name	Medicare Part B Average Spending Per Billing Unit[22]	Unadjusted Ratios		Adjusted Ratios[21]	
				Non-U.S. OECD Average (32 countries)	Non-U.S. OECD Average (19 countries)	Non-U.S. OECD Average (32 countries)	Non-U.S. OECD Average (19 countries)
J0129	Orencia	Abatacept	$45.981	2.55	2.51	1.88	1.87
J0178	Eylea	Aflibercept	$903.934	2.12	2.03	1.60	1.56
J0585	Botox	Onabotulinumtoxina	$5.542	4.01	3.59	2.85	2.71
J0717	Cimzia	Certolizumab Pegol	$7.344	3.13	2.86	2.38	2.21
J0881	Aranesp	Darbepoetin Alfa In Polysorbat	$3.346	2.20	2.14	1.57	1.57
J0885	Epogen	Epoetin Alfa	$11.428	1.75	1.67	1.19	1.15
J0897	Prolia	Denosumab	$16.164	4.98	4.90	3.62	3.74
J1300	Soliris	Eculizumab	$191.596	1.19	1.19	0.88	0.88
J1439	Injectafer	Ferric Carboxymaltose	$0.920	6.57	5.63	4.91	4.42
J1459	Privigen	Immun Glob G(Igg)/Pro/Iga 0-50	$32.569	1.51	1.56	1.05	1.15
J1556	Bivigam	Immun Glob G(Igg)/Gly/Iga Ov50	$55.089	2.56	2.65	1.77	1.95
J1557	Gammaplex	Immun Glob G(Igg)/Gly/Iga 0-50	$45.253	2.10	2.17	1.45	1.60
J1561	Gammaked*	Immune Globul G/Gly/Iga Avg 46*	$34.601	1.61	1.66	1.11	1.22
J1568	Octagam	Immun Globg(Igg)/Malt/Iga Ov50	$33.767	1.57	1.62	1.08	1.20

[21] Ratios adjusted for differences in purchasing power-adjusted GDP per capita.
[22] These numbers differ from the numbers in Table 1 because they have been adjusted to remove an estimated add-on payment.

HCPCS Code	Brand Name	Nonproprietary Name	Medicare Part B Average Spending Per Billing Unit[22]	Unadjusted Ratios		Adjusted Ratios[21]	
				Non-U.S. OECD Average (32 countries)	Non-U.S. OECD Average (19 countries)	Non-U.S. OECD Average (32 countries)	Non-U.S. OECD Average (19 countries)
J1569	Gammagard Liquid	Immun Glob G(Igg)/Gly/Iga Ov50	$36.605	1.70	1.76	1.17	1.30
J1602	Simponi Aria	Golimumab	$22.013	1.17	1.12	0.86	0.85
J1745	Remicade	Infliximab	$73.488	1.53	1.47	1.14	1.12
J1930	Somatuline Depot	Lanreotide Acetate	$50.996	5.31	5.21	3.76	3.83
J2182	Nucala	Mepolizumab	$27.852	2.27	2.27	1.69	1.69
J2323	Tysabri	Natalizumab	$16.385	2.73	2.67	2.02	2.04
J2350	Ocrevus	Ocrelizumab	$52.951	10.17	10.24	8.38	8.74
J2353	Sandostatin Lar Depot	Octreotide Acetate,mi-Spheres	$166.400	3.90	3.56	2.84	2.69
J2357	Xolair	Omalizumab	$31.351	2.57	2.37	1.84	1.76
J2469	Aloxi	Palonosetron HCL	$17.516	5.10	4.90	3.63	3.51
J2505	Neulasta	Pegfilgrastim	$3,967.652	4.17	3.95	3.06	2.99
J2778	Lucentis	Ranibizumab	$353.106	7.02	6.27	5.26	4.79
J2785	Lexiscan	Regadenoson	$53.220	2.58	2.58	1.96	1.96
J2796	NPlate	Romiplostim	$60.727	2.45	2.45	1.79	1.81
J3262	Actemra	Tocilizumab	$4.171	2.39	2.35	1.76	1.77
J3357	Stelara	Ustekinumab	$157.292	3.34	3.33	2.50	2.52
J3380	Entyvio	Vedolizumab	$16.510	1.99	1.99	1.51	1.51
J7325	Synvisc	Hylan G-F 20	$11.189	1.69	1.71	0.93	1.26
J9022	Tecentriq	Atezolizumab	$71.350	0.60	0.60	0.41	0.43
J9033	Treanda	Bendamustine HCL	$26.327	7.24	6.94	5.23	5.13
J9034	Bendeka	Bendamustine HCL	$22.300	6.13	5.88	4.43	4.35
J9035	Avastin	Bevacizumab	$67.601	2.25	2.18	1.61	1.60
J9041	Velcade	Bortezomib	$40.612	1.38	1.27	1.00	0.94
J9042	Adcetris	Brentuximab Vedotin	$124.177	1.89	1.75	1.29	1.24
J9047	Kyprolis	Carfilzomib	$30.047	1.58	1.50	1.04	1.07
J9055	Erbitux	Cetuximab	$51.494	2.51	2.33	1.69	1.67
J9145	Darzalex	Daratumumab	$47.841	0.97	0.97	0.72	0.73

HCPCS Code	Brand Name	Nonproprietary Name	Medicare Part B Average Spending Per Billing Unit[22]	Unadjusted Ratios		Adjusted Ratios[21]	
				Non-U.S. OECD Average (32 countries)	Non-U.S. OECD Average (19 countries)	Non-U.S. OECD Average (32 countries)	Non-U.S. OECD Average (19 countries)
J9217	Eligard	Leuprolide Acetate	$196.303	1.09	0.90	0.78	0.66
J9228	Yervoy	Ipilimumab	$125.241	1.74	1.74	1.36	1.36
J9264	Abraxane	Paclitaxel Protein-Bound	$9.760	5.95	5.37	4.20	3.82
J9267	Paclitaxel	Paclitaxel	$0.115	0.07	0.06	0.05	0.05
J9271	Keytruda	Pembrolizumab	$41.581	1.32	1.32	0.96	0.97
J9299	Opdivo	Nivolumab	$23.528	1.61	1.59	1.16	1.17
J9305	Alimta	Pemetrexed Disodium	$57.803	2.55	2.45	1.82	1.77
J9306	Perjeta	Pertuzumab	$10.067	1.26	1.19	0.89	0.86
J9310*	Rituxan	Rituximab	$779.076	3.70	3.58	2.64	2.68
J9354	Kadcyla	Ado-Trastuzumab Emtansine	$26.164	1.50	1.33	1.04	0.95
J9355	Herceptin	Trastuzumab	$88.598	2.93	2.82	2.03	2.07
J9395	Faslodex	Fulvestrant	$84.264	2.29	2.14	1.61	1.56
Q2043[23]	Provenge	Sipuleucel-T/Lactated Ringers	$37,774.148	N/A	N/A	N/A	N/A
Q5103	Inflectra	Infliximab-Dyyb	$61.053	1.27	1.22	0.95	0.93
Q5104	Renflexis	Infliximab-Abda	$63.325	1.31	1.26	0.98	0.96
Q5106	Retacrit	Epoetin Alfa-Epbx	$10.853	1.67	1.59	1.13	1.09
Non-U.S. OECD Average (32 countries)				2.11		1.53	
Non-U.S. OECD Average (19 countries)					2.05		1.52

* Rituximab was assigned a new J-code, J9312, effective in 2019.

[23] IQVIA MIDAS did not include any international spending data for this product in any comparator country.

Source: IQVIA MIDAS (Data Extracted on July 29, 2019), CMS Medicare Part B Drug Spending Dashboard. & CIA World Factbook

Countries with lower GDP per capita, adjusted for purchasing power, have fewer resources with which to purchase prescription drugs, and thus, in economic terms, may have lower ability or willingness to pay.[24] Table 3 includes volume-weighted price ratios for each drug, and for the two multidrug measures, that adjust for income differences by dividing the prices in countries with lower GDP per capita, adjusted for purchasing power, than the U.S. by the ratio of that country's GDP per capita to that for the U.S.. Other country's prices for Part B drugs are thus adjusted upwards, resulting in lower volume-weighted price ratios than with the unadjusted data. We did not apply this adjustment to the four countries in our data with GDP per capita above the U.S.: Ireland, Luxembourg, Norway, and Switzerland. The adjustment for GDP per capita reduces the ratio for the non-U.S., 32-country OECD average to 1.53 and the ratio for the non-U.S., 19-country OECD average to 1.52.

Some HCPCS codes have larger price differences than other codes. For instance, ocrelizumab (J2350) has an international average price 10 times greater than the price paid under Medicare Part B and is still more than 8 times greater when adjusting for per capita GDP. Meanwhile, three products have unadjusted ratios less than 1.00 and 11 have adjusted ratios less than 1.00.[25]

Part B spends **2.05** *times as much on prescription drugs as it would spend at the prices in other higher-income OECD countries.*

Table 4 shows the overall volume-weighted price ratios by country. Five countries (Chile, Greece, Latvia, Luxembourg[26], and Turkey) had unadjusted ratios above 4.00, suggesting Part B pays at least four times the prices these countries pay for these drugs. Meanwhile the lowest unadjusted ratio was for Japan at 1.48. When adjusting for per capita GDP, three countries (Estonia[27], Mexico, and Spain[28]) had ratios below 1.00. For the 19 higher-income non-U.S. OECD, the U.S. spends 2.05 as much on these Part B drugs.

[24] See the discussion in Council of Economic Advisers, "Funding the Global Benefits to Biopharmaceutical Innovation, February 2020 (https://www.whitehouse.gov/wp-content/uploads/2020/02/Funding-the-Global-Benefits-to-Biopharmaceutical-Innovation.pdf).

[25] These numbers include J9267. This HCPCS code was included in because it has the same active ingredient as the top 50 code J9264. The international comparisons for both codes include formulations that may be better captured by the other code. As a result, the ratio for J9264 is larger than expected and the ratio for J9267 is smaller than expected compared to an analysis that could precisely split the formulations into the most appropriate HCPCS code.

[26] The Luxembourg comparison is based on a single product.

[27] The Estonia comparison is based on a single product.

[28] Spain's ratio rounds up to 1.00.

Table 4. Overall Ratios Spending for Matched Part B Drugs by Country

Country	Unadjusted Ratio	Adjusted Ratio
Australia*	2.04	1.72
Austria*	1.77	1.48
Belgium*	2.02	1.57
Canada*	1.79	1.45
Chile	4.43	2.14
Czechia	2.74	1.62
Estonia	1.79	0.95
Finland*	1.90	1.42
France*	2.25	1.66
Germany*	1.92	1.63
Greece	4.66	2.17
Hungary	2.09	1.03
Ireland*	1.94	1.94
Italy*	1.94	1.24
Japan*	1.48	1.06
Korea*	3.44	2.27
Latvia	4.01	1.86
Lithuania	3.09	1.68
Luxembourg*	5.23	5.23
Mexico	2.16	0.72
Netherlands*	2.00	1.80
New Zealand*	1.92	1.25
Norway*	2.07	2.07
Poland	2.55	1.26
Portugal	2.55	1.30
Slovakia	2.87	1.59
Slovenia	3.07	1.77
Spain*	1.56	1.00
Sweden*	2.15	1.84
Switzerland*	1.86	1.86

Country	Unadjusted Ratio	Adjusted Ratio
Turkey	5.19	2.29
United Kingdom*	2.20	1.63
Country Minimum	1.48	0.72
Country Maximum[29]	5.23	5.23
Non-U.S. OECD Average (32 countries)	2.11	1.53
Non-U.S. OECD Average (19 countries)	2.05	1.52

Notes: Country Minimum shown in blue. Country Maximum shown in orange.
* Gross Domestic Product per capita (adjusted for purchasing power) is at least 60 percent of U.S.; included in Non-U.S. OECD Average (19 countries).
For countries with GDP per capita (adjusted for purchasing power) less than or equal to the U.S., adjusted ratio equals the unadjusted ratio dividing by the ratio of that country's GDP per capita to that for the U.S.. For countries with GDP per capita (adjusted for purchasing power) greater than the U.S. (Ireland, Luxembourg, Norway, and Switzerland), no adjustment is applied and the unadjusted ratio is equal to the adjusted ratio.
Source: IQVIA MIDAS (Data Extracted on July 29, 2019), CMS Medicare Part B Drug Spending Dashboard, & CIA World Factbook.

[29] This maximum is based on Luxembourg, which based on data for one drug. If Luxembourg was excluded the maximum ratios would 5.19 and 2.29, both for Turkey.

Conclusion

The research summarized in this Issue Brief suggests that the U.S. may spend more than twice as much on average (a ratio of 2.05) as other high-income OECD countries for the top 50 drugs in Medicare Part B.[30] Unadjusted Part B payment amounts for these drugs are higher than prices in each of the 32 OECD countries for which we have data. Medicare--and Medicare FFS Part B beneficiaries--pay more than other OECD countries for all but a few of the top 50 Part B drugs.

[30] This estimate is not directly comparable to ASPE's previous estimate (a ratio of 1.8) because the new estimate includes different drugs and different countries, and uses different methods to calculate the number of HCPCS billing units in other countries.

APPENDIX A: Methods

Data Sources

IQVIA MIDAS and NSP Data

For this study, we used two IQVIA data products that contain pricing and volume information. First, MIDAS is IQVIA's international sales and volume database, which contains sales information (price and quantity) for more than 50 countries over a rolling 24 quarter period. We obtained the data for all of 2018 on July 29, 2019. For our analysis, we used ex-manufacturer prices (sometimes called the ex-factory price) converted to U.S. currency on the transaction date. These data were used to calculate the results presented in this issue. IQVIA also provides sales and volume information on U.S. domestic sales in its National Sales Perspective (NSP) database. We used the NSP to inform a mapping of the identified HCPCS codes to the standardized naming since it contains NDC information that can be mapped to CMS data.

Medicare Part B Dashboard

ASPE used the 2018 CMS Medicare Part B Drug Spending Dashboard[31] to obtain overall Part B spending and billing units for the included drugs. This dashboard uses information from Medicare Part B claims to calculate the total Medicare spending on various drug products (including the add-on payment). For our analysis, we reduced the HCPCS-level spending in the Dashboard by dividing the spending by 1.04303 to account for the 4.303 percent post-sequestration add-on. In addition, we constructed an additional spending variable using the Average Sales Price field. We scaled the Average Sales Price variable down by 1.06 to the account for the 6 percent pre-sequestration add-on. These results (not displayed) would increase estimated Part B spending.

Average Sales Price (ASP) Files

We used the July 2018 ASP NDC-HCPCS Crosswalk file published on the CMS website to identify the National Drug Codes (NDCs) assigned to the identified HCPCS codes.

Central Intelligence Agency (CIA) World Factbook

We used the CIA World Factbook (https://www.cia.gov/library/publications/resources/the-world-factbook/fields/211rank.html) to identify purchasing power parity-adjusted per capita gross domestic product (GDP) estimates for each OECD member country. GDP compares the GDP or value of all final goods and services produced within a nation in a given year. A nation's GDP at purchasing power parity (PPP) exchange rate is the sum value of all goods and services produced in the country valued at prices prevailing in the U.S.. Estimated GDP adjusted for purchasing power parity is divided by estimated population to produce the estimate of GDP per capita (adjusted for purchasing power parity) that is used to adjust the prices observed in the IQVIA MIDAS data for countries with GDP per capita (adjusted for purchasing power parity) below that of the U.S..

Drug Selection

Using the Medicare Part B spending Dashboard, we selected the top 50 HCPCS codes after exclusions. In particular, ASPE excluded vaccines, drugs used to treat End State Renal Disease (including immunosuppressive products used after kidney transplantation), blood factors, and drugs administered using durable medical equipment. After these exclusions, we examined if there were other HCPCS codes for the same active

[31] https://www.cms.gov/Research-Statistics-Data-and-Systems/Statistics-Trends-and-Reports/Information-on-Prescription-Drugs/MedicarePartB

ingredients that have the same HCPCS billing unit and route of administration. These resulted in the addition of several biosimilar HCPCS codes, additional immune globulin HCPCS codes, and including Treanda (an older brand with the same molecule as Bendeka) and the non-Protein bound version of paclitaxel. The restrictions on the same HCPCS billing unit helped us avoid having to map MIDAS presentations to multiple billing units. The restriction on route of administration prevented the inclusion of additional minor HCPCS codes that may not be comparable products and can be easily separated out in the MIDAS data.

Included Countries

This analysis examined data for 33 of the 36 countries in the OECD in 2018. We did not have IQVIA MIDAS data on Denmark, Iceland, and Israel, and Colombia did not join the OECD until April 2020.

Establishing International Equivalents of U.S. HCPCS Codes

We attempted to create international equivalents of codes by examining information from CMS including information on nonproprietary names, brand names, and product formulations. We examined information in the MIDAS database involving the same. Our first attempt to map products involved matching the MIDAS "Molecule List" to HCPCS codes.

Once all the molecules were mapped, we restricted the relevant formulations of the products to injectable formulations (including ophthalmologic injections). We excluded the non-ophthalmologic version of aflibercept.

With the list of MIDAS formulations selected, we examined each product at a formulation level to determine the number of HCPCS billing units in each package and to create a crosswalk from the MIDAS Standard Units to the HCPCS code Billing Units. The MIDAS sales divided by the billing units gave us the resulting international prices. The volume-weighted OECD average price represents the sum of MIDAS sales across the non-US OECD countries divided by the resulting billing units across the OECD countries.

Low-Volume/Low-Sales Exclusion

To exclude potential outliers, we removed observations with low volume and low sales. In this instance an observation represents a package, country, quarter observation for a product. If a product had 1,000 or fewer standard units or a $1,000 of fewer sales, we excluded it from the analysis.

Comparison between International Part B Prices and International Prices

In this analysis, we compared the U.S. spending in Medicare Part B to the hypothetical U.S. spending at international prices. To conduct this analysis, we multiplied the U.S. billing units administered to by the relevant international prices per billing unit. The ratios provided are the result of dividing current U.S. spending by the hypothetical U.S. spending at the international prices.

Differences from the 2018 Brief

The methods listed above differ from ASPE's previous issue brief.[32] This brief includes differences in the included drugs and comparator countries. In addition, there are more subtle differences in methodology. For instance, we calculated billing units in a different manner in this issue brief. The package-level method for counting billing units mirrors how CMS determines ASP for a product. This difference increases the number of billing units compared to our approach in the 2018 brief and results in slightly lower international prices. In

[32] https://aspe.hhs.gov/pdf-report/comparison-us-and-international-prices-top-medicare-part-b-drugs-total-expenditures

addition, for the 2018 brief we considered international prices of products to the U.S. ASP based on the point in time that the sales occurred. In this brief we compared 2018 Medicare Part B payment amounts to 2018 international prices. Since there is a 2 quarter lag in setting the ASP, some of the Medicare payments are based on prices paid in 2017 and some of the 2018 international prices would be contemporaneous with U.S. sales that that would not be reflected in ASP until 2019.

APPENDIX B: International Availability of Products to Compare with Top Part B Drugs, by Drug and Country

Table B-1

HCPCS Code	U.S. Brand Name	Australia	Austria	Belgium	Canada	Chile	Czechia	Estonia	Finland	France	Germany	Greece	Hungary	Ireland	Italy	Japan	Korea
J0129	Orencia	Yes	Yes	Yes	Yes	No	Yes	No	Yes	Yes	Yes	No	Yes	Yes	Yes	Yes	Yes
J0178	Eylea	Yes	Yes	Yes	Yes	No	Yes	No	Yes	Yes	Yes	No	Yes	Yes	Yes	Yes	Yes
J0585	Botox	Yes	Yes	Yes	Yes	Yes	Yes	No	Yes	Yes	Yes	Yes	No	Yes	Yes	Yes	Yes
J0717	Cimzia	Yes	Yes	Yes	Yes	No	Yes	No	Yes	Yes	Yes	No	Yes	Yes	Yes	Yes	No
J0881	Aranesp	Yes	Yes	Yes	Yes	No	Yes	Yes	Yes	Yes	Yes	No	Yes	Yes	Yes	Yes	Yes
J0885	Epogen	Yes	Yes	Yes	Yes	Yes	Yes	No	No	Yes	Yes	No	Yes	No	Yes	Yes	Yes
J0897	Prolia	Yes	Yes	Yes	Yes	Yes	Yes	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
J1300	Soliris	No	No	No	No	No	No	No	No	Yes	Yes	No	No	No	Yes	No	Yes
J1439	Injectafer	Yes	Yes	Yes	Yes	Yes	Yes	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
J1459	Privigen	No	Yes	Yes	No	No	Yes	No	Yes	Yes	Yes	No	Yes	No	Yes	Yes	Yes
J1556	Bivigam	No	Yes	Yes	No	No	Yes	No	Yes	Yes	Yes	No	Yes	No	Yes	Yes	Yes
J1557	Gammaplex	No	Yes	Yes	No	No	Yes	No	Yes	Yes	Yes	No	Yes	No	Yes	Yes	Yes
J1561	Gammaked	No	Yes	Yes	No	No	Yes	No	Yes	Yes	Yes	No	Yes	No	Yes	Yes	Yes
J1568	Octagam	No	Yes	Yes	No	No	Yes	No	Yes	Yes	Yes	No	Yes	No	Yes	Yes	Yes
J1569	Gammagard Liquid	No	Yes	Yes	No	No	Yes	No	Yes	Yes	Yes	No	Yes	No	Yes	Yes	Yes
J1602	Simponi Aria	Yes	Yes	Yes	Yes	No	Yes	No	Yes	Yes	Yes	No	Yes	Yes	Yes	Yes	Yes
J1745	Remicade	Yes	Yes	Yes	Yes	No	Yes	No	Yes	Yes	Yes	No	Yes	Yes	Yes	Yes	Yes
J1930	Somatuline Depot	Yes	No	Yes	Yes	No	Yes	No	No	Yes	Yes	No	No	No	Yes	Yes	No
J2182	Nucala	Yes	Yes	Yes	Yes	No	No	No	No	Yes	Yes	No	No	No	Yes	Yes	No
J2323	Tysabri	Yes	Yes	Yes	Yes	No	Yes	No	No	Yes	Yes	No	Yes	Yes	Yes	No	No
J2350	Ocrevus	Yes	No	No	No	No	No	No	No	No	Yes	No	No	No	No	No	No

HCPCS Code	U.S. Brand Name	Australia	Austria	Belgium	Canada	Chile	Czechia	Estonia	Finland	France	Germany	Greece	Hungary	Ireland	Italy	Japan	Korea
J2353	Sandostatin Lar Depot	Yes	No	Yes	Yes	No	No	No	No	Yes	Yes	No	Yes	No	Yes	Yes	No
J2357	Xolair	Yes	Yes	Yes	Yes	No	Yes	No	Yes	Yes	Yes	No	Yes	Yes	Yes	Yes	Yes
J2469	Aloxi	Yes	Yes	Yes	No	No	No	No	No	Yes	Yes	Yes	No	No	Yes	Yes	Yes
J2505	Neulasta	Yes	Yes	Yes	Yes	No	Yes	No	Yes	Yes	Yes	No	No	Yes	Yes	Yes	Yes
J2778	Lucentis	Yes	No	Yes	Yes	No	Yes	No	No	Yes	Yes	No	No	Yes	Yes	Yes	Yes
J2785	Lexiscan	No	Yes	No	No	No	No	No	No	Yes	Yes	No	No	No	No	No	No
J2796	NPlate	No	No	No	Yes	No	Yes	No	No	Yes	Yes	No	Yes	No	Yes	Yes	No
J3262	Actemra	Yes	Yes	Yes	Yes	No	Yes	No	Yes	Yes	Yes	No	Yes	Yes	Yes	Yes	Yes
J3357	Stelara	Yes	Yes	Yes	Yes	No	No	No	No	Yes	Yes	No	No	Yes	Yes	Yes	Yes
J3380	Entyvio	No	Yes	Yes	No	No	No	No	Yes	Yes	Yes	No	No	Yes	Yes	Yes	No
J7325	Synvisc	No	No	No	Yes	No	No	No	No	No	Yes	No	No	No	No	Yes	No
J9022	Tecentriq	No	No	No	No	No	No	No	No	No	Yes	No	No	No	No	Yes	No
J9033	Treanda	Yes	Yes	Yes	Yes	No	Yes	No	No	Yes	Yes	No	Yes	No	Yes	Yes	Yes
J9034	Bendeka	Yes	Yes	Yes	Yes	No	Yes	No	No	Yes	Yes	No	Yes	No	Yes	Yes	Yes
J9035	Avastin	Yes	Yes	Yes	Yes	No	Yes	No	Yes	Yes	Yes	No	Yes	Yes	Yes	Yes	Yes
J9041	Velcade	Yes	Yes	Yes	Yes	No	Yes	No	Yes	Yes	Yes	No	Yes	Yes	Yes	Yes	Yes
J9042	Adcetris	No	No	No	No	No	No	No	No	Yes	Yes	No	No	No	Yes	Yes	No
J9047	Kyprolis	No	Yes	Yes	Yes	No	No	No	Yes	Yes	Yes	No	No	No	Yes	Yes	Yes
J9055	Erbitux	Yes	Yes	Yes	Yes	No	Yes	No	No	Yes	Yes	No	Yes	No	Yes	Yes	Yes
J9145	Darzalex	No	Yes	Yes	Yes	No	No	No	No	Yes	Yes	No	No	Yes	Yes	Yes	No
J9217	Eligard	Yes	Yes	Yes	Yes	No	Yes	No	Yes	Yes	Yes	Yes	Yes	No	Yes	Yes	Yes
J9228	Yervoy	No	No	No	Yes	No	No	No	No	Yes	Yes	No	No	No	No	Yes	No
J9264	Abraxane	Yes	Yes	Yes	Yes	No	Yes	No	Yes	Yes	Yes	No	Yes	Yes	Yes	Yes	Yes
J9267	Paclitaxel	Yes	Yes	Yes	Yes	No	Yes	No	Yes	Yes	Yes	No	Yes	Yes	Yes	Yes	Yes
J9271	Keytruda	Yes	Yes	Yes	Yes	No	No	No	No	Yes	Yes	No	Yes	Yes	Yes	Yes	Yes

HCPCS Code	U.S. Brand Name	Australia	Austria	Belgium	Canada	Chile	Czechia	Estonia	Finland	France	Germany	Greece	Hungary	Ireland	Italy	Japan	Korea
J9299	Opdivo	Yes	Yes	Yes	Yes	No	Yes	No	Yes	Yes	Yes	No	Yes	Yes	Yes	Yes	Yes
J9305	Alimta	No	Yes	Yes	Yes	No	No	No	No	Yes	Yes	No	Yes	No	Yes	Yes	Yes
J9306	Perjeta	Yes	Yes	Yes	No	No	No	No	No	Yes	Yes	No	No	No	Yes	Yes	Yes
J9310	Rituxan	Yes	Yes	Yes	Yes	No	Yes	No	Yes	Yes	Yes	No	Yes	Yes	Yes	Yes	Yes
J9354	Kadcyla	No	No	No	Yes	No	No	No	No	Yes	Yes	No	No	No	Yes	Yes	Yes
J9355	Herceptin	Yes	Yes	Yes	Yes	No	Yes	No	Yes	Yes	Yes	No	Yes	Yes	Yes	Yes	Yes
J9395	Faslodex	Yes	Yes	Yes	Yes	No	Yes	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Q2043	Provenge	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No
Q5103	Inflectra	Yes	Yes	Yes	Yes	No	Yes	No	Yes	Yes	Yes	No	Yes	Yes	Yes	Yes	Yes
Q5104	Renflexis	Yes	Yes	Yes	Yes	No	Yes	No	Yes	Yes	Yes	No	Yes	Yes	Yes	Yes	Yes
Q5106	Retacrit	Yes	Yes	Yes	Yes	Yes	Yes	No	No	Yes	Yes	No	Yes	No	Yes	Yes	Yes
Number of Comparison Codes		38	45	47	42	5	38	1	31	53	56	6	37	28	51	52	42

Table B-1 (Cont.)

HCPCS Code	Brand Name	Latvia	Lithuania	Luxembourg	Mexico	Netherlands	New Zealand	Norway	Poland	Portugal	Slovakia	Slovenia	Spain	Sweden	Switzerland	Turkey	United Kingdom
J0129	Orencia	No	No	No	Yes	No	No	Yes	No	No	No	No	Yes	Yes	Yes	Yes	Yes
J0178	Eylea	No	No	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
J0585	Botox	No	No	No	Yes	No	No	Yes	Yes	Yes	Yes	No	Yes	Yes	No	Yes	Yes
J0717	Cimzia	No	No	No	No	No	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
J0881	Aranesp	Yes	Yes	No	No	Yes	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
J0885	Epogen	No	Yes	No	No	Yes	Yes	No	Yes	Yes	Yes	Yes	Yes	No	Yes	Yes	Yes
J0897	Prolia	No	Yes	Yes	Yes	Yes	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
J1300	Soliris	No	No	No	No	No	No	No	No	No	No	No	Yes	No	No	No	Yes
J1439	Injectafer	Yes	Yes	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
J1459	Privigen	No	Yes	No	Yes	Yes	No	Yes	Yes	Yes	Yes	No	Yes	Yes	No	Yes	Yes
J1556	Bivigam	No	Yes	No	Yes	Yes	No	Yes	Yes	Yes	Yes	No	Yes	Yes	No	Yes	Yes
J1557	Gammaplex	No	Yes	No	Yes	Yes	No	Yes	Yes	Yes	Yes	No	Yes	Yes	No	Yes	Yes
J1561	Gammaked	No	Yes	No	Yes	Yes	No	Yes	Yes	Yes	Yes	No	Yes	Yes	No	Yes	Yes
J1568	Octagam	No	Yes	No	Yes	Yes	No	Yes	Yes	Yes	Yes	No	Yes	Yes	No	Yes	Yes
J1569	Gammagard Liquid	No	Yes	No	Yes	Yes	No	Yes	Yes	Yes	Yes	No	Yes	Yes	No	Yes	Yes
J1602	Simponi Aria	No	No	No	No	No	No	Yes	Yes	Yes	Yes	No	Yes	Yes	Yes	Yes	Yes
J1745	Remicade	No	Yes	No	No	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
J1930	Somatuline Depot	No	No	No	No	Yes	No	Yes	Yes	No	No	No	Yes	Yes	No	Yes	Yes
J2182	Nucala	No	No	No	No	No	No	No	No	No	No	No	Yes	Yes	Yes	No	Yes
J2323	Tysabri	No	No	No	No	Yes	No	Yes	Yes	Yes	Yes	No	Yes	Yes	Yes	Yes	Yes
J2350	Ocrevus	No	No	No	No	No	No	No	No	No	No	No	No	No	Yes	Yes	No

HCPCS Code	Brand Name	Latvia	Lithuania	Luxembourg	Mexico	Netherlands	New Zealand	Norway	Poland	Portugal	Slovakia	Slovenia	Spain	Sweden	Switzerland	Turkey	United Kingdom
J2353	Sandostatin Lar Depot	No	No	No	No	Yes	No	Yes	Yes	Yes	No	No	Yes	Yes	No	Yes	Yes
J2357	Xolair	No	No	No	No	No	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
J2469	Aloxi	Yes	No	No	Yes	No	No	No	No	Yes	No	Yes	Yes	No	Yes	Yes	No
J2505	Neulasta	Yes	No	No	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	No	Yes	Yes	Yes
J2778	Lucentis	No	No	No	Yes	No	No	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
J2785	Lexiscan	No	No	No	No	No	No	No	No	No	No	No	Yes	Yes	No	No	Yes
J2796	NPlate	No	No	No	No	No	No	No	No	No	No	No	Yes	No	No	No	Yes
J3262	Actemra	No	No	No	Yes	Yes	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
J3357	Stelara	No	No	No	No	No	No	No	No	Yes	No	No	Yes	Yes	No	Yes	Yes
J3380	Entyvio	No	No	No	No	No	No	Yes	No	No	No	No	Yes	Yes	Yes	No	Yes
J7325	Synvisc	No	No	No	Yes	No	No	No	No	No	No	No	Yes	No	No	Yes	No
J9022	Tecentriq	No	No	No	No	No	No	No	No	No	No	No	Yes	No	No	No	Yes
J9033	Treanda	No	No	No	No	No	No	No	Yes	Yes	No	No	Yes	Yes	Yes	Yes	Yes
J9034	Bendeka	No	No	No	No	No	No	No	Yes	Yes	No	No	Yes	Yes	Yes	Yes	Yes
J9035	Avastin	No	No	No	No	No	No	Yes	Yes	Yes	Yes	No	Yes	Yes	Yes	Yes	Yes
J9041	Velcade	No	No	No	No	No	No	Yes	Yes	Yes	No	No	Yes	Yes	Yes	Yes	Yes
J9042	Adcetris	No	No	No	No	No	No	No	No	No	No	No	Yes	No	No	Yes	Yes
J9047	Kyprolis	No	No	No	No	No	No	Yes	No	No	No	No	Yes	Yes	Yes	Yes	Yes
J9055	Erbitux	Yes	No	No	No	No	No	No	Yes	Yes	Yes	No	Yes	No	Yes	Yes	Yes
J9145	Darzalex	No	No	No	No	No	No	Yes	No	No	No	No	Yes	Yes	Yes	No	Yes
J9217	Eligard	No	No	No	Yes	Yes	No	No	Yes	Yes	Yes	No	Yes	Yes	Yes	Yes	Yes
J9228	Yervoy	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No
J9264	Abraxane	Yes	Yes	No	No	No	No	Yes	Yes	Yes	Yes	No	Yes	Yes	Yes	Yes	Yes
J9267	Paclitaxel	Yes	Yes	No	No	No	No	Yes	Yes	Yes	Yes	No	Yes	Yes	Yes	Yes	Yes
J9271	Keytruda	No	No	No	No	No	Yes	Yes	Yes	Yes	No	Yes	Yes	Yes	Yes	Yes	Yes

HCPCS Code	Brand Name	Latvia	Lithuania	Luxembourg	Mexico	Netherlands	New Zealand	Norway	Poland	Portugal	Slovakia	Slovenia	Spain	Sweden	Switzerland	Turkey	United Kingdom
J9299	Opdivo	No	No	No	No	No	No	Yes	Yes	Yes	No	Yes	Yes	Yes	Yes	Yes	Yes
J9305	Alimta	No	No	No	No	No	Yes	No	Yes	Yes	No	No	Yes	Yes	Yes	Yes	Yes
J9306	Perjeta	No	No	No	No	No	No	No	Yes	Yes	No	No	Yes	Yes	Yes	Yes	Yes
J9310	Rituxan	No	No	No	No	No	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
J9354	Kadcyla	No	No	No	No	No	No	No	No	No	No	No	Yes	No	No	Yes	Yes
J9355	Herceptin	No	Yes	No	No	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
J9395	Faslodex	No	No	No	No	Yes	No	Yes	Yes	Yes	Yes	No	Yes	Yes	Yes	Yes	Yes
Q2043	Provenge	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No
Q5103	Inflectra	No	Yes	No	No	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Q5104	Renflexis	No	Yes	No	No	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Q5106	Retacrit	No	Yes	No	No	Yes	Yes	No	Yes	Yes	Yes	Yes	Yes	No	Yes	Yes	Yes
Number of Comparison Codes		7	17	1	16	19	11	35	40	41	31	19	54	43	38	48	52

Source: IQVIA MIDAS (Data Extracted on July 29, 2019)

U.S. DEPARTMENT OF HEALTH AND HUMAN SERVICES

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El-Kilani Z, Finegold K, Mulcahy A, and Bosworth, A. Medicare FFS Part B and International Drug Prices: A Comparison of the Top 50 Drugs. Washington, DC: Office of the Assistant Secretary for Planning and Evaluation, U.S. Department of Health and Human Services. November 20, 2020.

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