



—Inflation Reduction Act Research Series— Medicare Part D Enrollee Vaccine Use After Elimination of Cost Sharing for Recommended Vaccines in 2023

Effective January 1, 2023, the Inflation Reduction Act (IRA) eliminated cost sharing and deductibles for adult vaccines recommended by the Advisory Committee on Immunization Practices (ACIP) covered under Medicare Part D. In 2023, 10.3 million Medicare Part D enrollees received a recommended vaccine free of charge, which saved enrollees more than \$400 million in out-of-pocket costs.

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KEY POINTS

- The IRA established that, effective January 1, 2023, no deductible or cost sharing shall apply for adult vaccines recommended by ACIP and covered under Medicare Part D.
- Our findings show that in 2023, 10.3 million Medicare Part D enrollees received a recommended Part D covered vaccine with no cost sharing, which represents about 20 percent of the total Part D population.
- Among enrollees who received at least one Part D covered vaccine at no cost, the majority received the respiratory syncytial virus (RSV) vaccine (63 percent), followed by the shingles vaccine (38 percent) and the Tdap vaccine (14 percent), which protects against tetanus, diphtheria, and pertussis.
- If the IRA vaccine provision had *not* been in effect, enrollees who received vaccines with no cost sharing in 2023 would have paid approximately \$400 million in out-of-pocket costs for these vaccines* in 2023 (excluding the new RSV vaccine).[†]
- In 2021, 3.4 million people received vaccines, most of which were for shingles (2.7 million), under Part D and paid a total of \$234 million in out-of-pocket costs for these vaccines. In 2023, 3.9 million enrollees received a shingles vaccine, which is an increase of about 42 percent from 2021.[‡]

* This estimate is calculated using the overall average out-of-pocket spending per enrollee for vaccines for shingles, Tdap, Td, and “other vaccines” from previous ASPE analyses, updating to 2023 dollars, and applying the updated estimates to the 2023 estimates of use for each type of vaccine. Please see [here](#) for the original estimates of average out-of-pocket spending for each vaccine in 2021.

[†] We do not have an estimate of out-of-pocket spending for the RSV vaccine because the vaccine became available after the IRA’s vaccine provision went into effect.

[‡] About 5.3 percent of the Part D population received a vaccination for shingles in 2021. This increased to about 7.5 percent of the Part D population in 2023. Note that the total number of vaccinations in 2021 may have been lower than a more typical year due to the

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- Nearly 1.5 million enrollees received the Tdap vaccine in 2023, which is an increase of about 114 percent from 2021.
 - In 2023, 6.5 million enrollees received the recently licensed RSV vaccine free of charge under the IRA's vaccine provision.
 - Estimates show that California, Florida, and Texas had the highest absolute number of enrollees who received a vaccine under Part D with no cost sharing.
 - Colorado, Nebraska, and Washington had the highest share of enrollees accessing a Part D covered vaccine with no cost sharing at 27 percent each.
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BACKGROUND

Vaccines help to reduce the spread of disease, prevent serious illness, and limit severe health complications. Access to vaccines for older Americans, most of whom are covered by Medicare, is particularly important because changes in the immune system in older age can increase susceptibility to infectious diseases and increase the risk of more severe infections.¹ In 2023, about 51.9 million Medicare beneficiaries were enrolled in Medicare Part D, with the majority (88 percent) of enrollees ages 65 or older.

Vaccines covered under Medicare Part D include all commercially available vaccines not covered under Medicare Part B.* Part D coverage includes vaccines to protect against respiratory syncytial virus (RSV), shingles, tetanus, diphtheria, pertussis, and other infectious diseases. Unlike vaccines covered under Part B, which include vaccines for COVID-19, influenza, and pneumonia, Part D vaccine coverage historically could include cost sharing requirements.[†] However, as of January 1, 2023, the Inflation Reduction Act (IRA) established that no deductible or cost sharing shall apply for enrollees receiving Part D covered adult vaccines recommended by the Advisory Committee on Immunization Practices (ACIP).[‡] Appendix Table A1 presents a description of the infectious diseases and ACIP recommendations for older adults for the more commonly used vaccines covered under Part D.

In this Data Point, we examine the use of all vaccines covered under Medicare Part D with no cost sharing in 2023, after the IRA vaccine provision eliminated out-of-pocket spending for ACIP-recommended adult vaccines. We pay particular attention to two of the more commonly received Part D covered vaccines – vaccines for RSV and for shingles (which is also known as herpes-zoster). RSV vaccines are new, licensed by the Food and Drug Administration (FDA) in May 2023 and recommended for adults 60 and older by ACIP in June 2023.^{‡,3,4} The Centers for Disease Control and Prevention (CDC) reports that there are up to 160,000 RSV-related hospitalizations and up to 10,000 deaths among older adults due to RSV annually in the United States.⁵ The direct medical costs of RSV infections range from about \$1.7 billion to \$3.4 billion among adults ages 60

COVID-19 pandemic. Also, this estimate does not represent rates of vaccine coverage for the Medicare Part D population because it only captures enrollees who received a Part D covered vaccine during the time period examined. Some enrollees may have received a Part D covered vaccine in prior years and would not be eligible for another dose.

* Medicare Part B vaccine coverage includes vaccines to prevent influenza, pneumococcal disease, hepatitis B for beneficiaries who are at medium or high risk, and COVID-19. Congress has on four occasions amended the Medicare statute to cover specific preventive vaccines with no cost sharing under Part B: pneumococcal disease (1981); hepatitis B for patients at medium or high risk (1984); seasonal influenza, recommended annually (1993); and COVID-19 (2020). (See Medicare Payment Advisory Commission (MedPAC), [Report to the Congress: Medicare and the Health Care Delivery System](#), June 2021, p. 245.)

† Medicare Part D was enacted as part of the Medicare Prescription Drug, Improvement, and Modernization Act of 2003 (P.L. 108-173). Under Medicare Part D, vaccines determined reasonable and necessary to prevent illness are covered and were subject to cost sharing until January 1, 2023, when the IRA required no cost sharing for ACIP-recommended adult vaccines that are covered under Medicare Part D.

‡ The RSV vaccine is recommended for adults ages 60 and older with shared decision making with their health care provider. There are two RSV vaccines available: 1) [Abrysvo](#), which is indicated for adults ages 60 and older as well as pregnant individuals 32 through 36 weeks gestational age and 2) [Arexvy](#), which is indicated for adults 60 and older only.

and older in the United States.⁶ For shingles, researchers project that among an unvaccinated population, there would be about 1.1 million cases annually, resulting in about \$2.4 billion in direct medical spending in the United States.^{7,8}

Existing research finds that vaccine uptake is generally low for adults. Analysis using the National Health Interview Survey (NHIS) shows that less than half of all adults (<45 percent) received age-appropriate recommended vaccines.⁹ In 2021, shingles vaccination rates were about 41 percent among adults ages 60 and older.^{10,11} Many factors impact vaccine use, including out-of-pocket costs, which have been identified as a key barrier to vaccine uptake.^{12,13} Other factors include awareness of vaccine recommendations, access to a primary care physician, access to a routine source of medical care, and other sociodemographic and economic factors.^{14,15} A previous ASPE study found that 3.4 million Medicare enrollees received a Part D covered vaccine in 2021, however, this was prior to the availability of the RSV vaccine and prior to the IRA's elimination of cost sharing for certain Part D covered vaccines.^{*16} Both of these factors contributed to the higher 2023 utilization reported in this Data Point.

METHODS

ASPE worked with the Centers for Medicare & Medicaid Services (CMS) Office of Enterprise Data & Analytics (OEDA) to examine the use of vaccines under Medicare Part D in calendar year 2023. We used the Part D Prescription Drug Event (PDE) files to identify enrollees who received a Part D covered vaccine in 2023 with no cost sharing. National Drug Code (NDC)-11 codes were used to identify each vaccine.

We examined use of vaccines separately depending on whether enrollees receive the Low Income Subsidy (LIS), also referred to as Extra Help.[†] Prior to the IRA, enrollees who did not receive LIS had higher out-of-pocket spending for Part D covered vaccines than they do now. Previous ASPE analyses found that non-LIS enrollees paid about \$86 on average for Part D covered vaccines in 2021 while LIS enrollees paid about \$6 on average for the same vaccines.¹⁷ With the IRA's elimination of cost sharing for Part D covered, ACIP-recommended adult vaccines going into effect in 2023, we would expect an increase in the number of enrollees, especially non-LIS, receiving Part D vaccines.

We present estimates separately for the following vaccines: RSV, shingles, Td, and Tdap. Estimates for the remainder of Part D vaccines are presented as "Others" and include, for example, vaccines for Hepatitis A, Hepatitis B, measles, mumps, rubella (MMR) and other commercially available vaccines that are not covered under Part B but are determined to be reasonable and necessary under the Medicare statute (including vaccines recommended for international travel). We examined demographic characteristics for everyone who received a Part D covered vaccine with no cost sharing overall and for the two more common vaccines: RSV and shingles. We examined the state or territory of residence for enrollees who received any Part D covered vaccine in 2023 with no cost sharing.

There are several limitations of our analyses. First, the estimates presented in this Data Point do not represent rates of vaccine coverage for the Medicare Part D population because our analyses do not capture enrollees

* Note that the total number of vaccinations in 2021 may have been lower than a more typical year due to the COVID-19 pandemic. In addition, some Part D enrollees may have received a Part D covered vaccine with no cost sharing prior to the IRA vaccine provision going into effect. See [here](#) for more details.

† For eligible enrollees whose income and resources are limited, the Medicare Prescription Drug, Improvement and Modernization Act of 2003 established the Low-Income Subsidy, also known as Extra Help. Subsidies are paid by the Federal government to drug plans and provide assistance with premiums, deductibles, and co-payments. Under the IRA, beginning in 2024, the LIS program is expanded to individuals with limited financial resources and incomes up to 150 percent of the Federal Poverty Limit (FPL). For more information, please see [here](#).

who received a Part D covered vaccine prior to 2023. It is possible, for example, that some enrollees obtained the vaccine at the age they first become eligible, in some cases before they enrolled in Medicare (for instance, shingles vaccination is recommended starting at age 50). If so, their vaccine use would only be included in our analyses if they became eligible for and received the Part D covered vaccine in 2023. This limitation does not apply to the RSV vaccine because it became available for the first time in 2023. Second, our estimates do not disentangle how different factors such as income, race or ethnicity, institutional setting, and age contribute to differences in vaccine use. Existing research shows that cost sharing is one factor among other determinants, such as trust in vaccines, access to health care, and awareness of vaccine recommendations, that shape whether individuals obtain a recommended vaccine.^{18,19} Finally, if an enrollee received a vaccine that was not paid for by Medicare, it would not be included in our estimates. For example, if an enrollee received a Part D covered vaccine in an institutional setting and there was no separate Part D claim for the vaccine because it was bundled with other services, it would not be included in our estimates. This would lead to an undercount of vaccine use.

FINDINGS

Our findings show that overall, 10.3 million enrollees received a Part D covered vaccine in 2023 with no out-of-pocket costs (Table 1), representing about 20 percent of the total Part D population. The majority of these enrollees received a vaccine for RSV (63 percent), followed by shingles (38 percent), followed by Tdap and Td (about 15 percent combined) (Figure 1). The remaining enrollees received other Part D covered vaccines, such as for Hepatitis A, with no cost sharing.

10.3 million

Medicare Part D enrollees received a vaccine with no out-of-pocket costs under the IRA's vaccine provision

Among LIS enrollees, 1.5 million received a vaccine, representing about 11 percent of all LIS enrollees.* The majority of these LIS enrollees received the shingles vaccine (51 percent), followed by the RSV vaccine (46 percent).

Among non-LIS enrollees, about 8.7 million received a Part D covered vaccine with no cost sharing, representing about 23 percent of all non-LIS enrollees.† Among non-LIS enrollees who received a vaccine, a greater share received the RSV vaccine (67 percent), followed by the shingles vaccine (36 percent).

* There were 14.4 million total LIS enrollees in 2023, which means that about 11 percent of these enrollees received a Part D covered vaccine.

† There were 37.5 million total non-LIS enrollees in 2023, which means that about 23 percent of non-LIS enrollees received a Part D covered vaccine.

Table 1. Vaccine Use for Medicare Part D Enrollees by LIS Status, 2023

Vaccines	LIS Enrollees	Non-LIS Enrollees	Total Enrollees
RSV	710,000	5,800,000	6,500,000
Shingles	783,000	3,111,000	3,900,000
Tdap	287,000	1,200,000	1,487,000
Td	11,000	49,000	59,000
Other Vaccines*	64,000	158,000	221,000
Total Number of Enrollees who Received a Part D covered vaccine with no cost sharing**	1,547,000	8,722,000	10,269,000

Source: CMS OEDA analysis of the Medicare Prescription Drug Event (PDE) and Medicare enrollment data files.

Notes: This sample is restricted to enrollees who received at least one vaccine at no cost that is covered under Part D.

* Other vaccines include, for example, vaccines to protect against measles, mumps, and rubella (MMR); meningococcal disease; typhoid fever, and others, including vaccines for international travel.

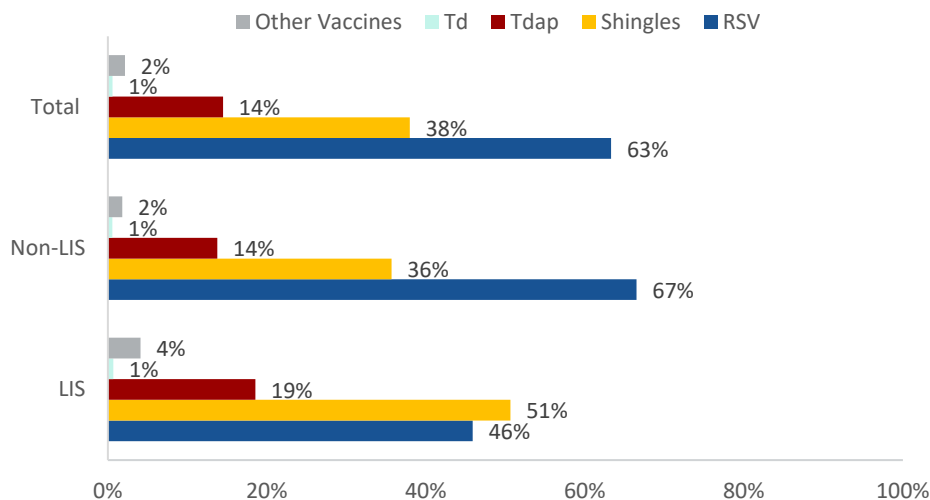
** Total enrollees are those who received any Part D vaccine. The total number of enrollees counts an enrollee only once even if they received more than one vaccine.

RSV = Respiratory Syncytial Virus

Tdap = Tetanus, diphtheria, and acellular pertussis vaccine

Td = Tetanus and diphtheria vaccine

Figure 1. Share of Vaccine Use for Medicare Part D Enrollees by LIS Status, 2023



Notes: Percentages do not add up to 100 percent because some enrollees have received more than one type of vaccine. The denominator is the total number of unique enrollees for each category (total, non-LIS, and LIS) who received any Part D covered vaccine with no cost-sharing in 2023.

RSV = Respiratory Syncytial Virus

Td = Tetanus and diphtheria vaccine

Tdap = Tetanus, diphtheria, and acellular pertussis vaccine

Medicare Part D Enrollee Vaccine Use by Demographic Characteristics

Next, we examined the demographic characteristics of enrollees who received a Part D covered vaccine with no cost sharing, paying specific attention to the two more common vaccines: RSV and shingles. Table 2 presents the percent of enrollees who received these vaccines among the Medicare Part D population for each demographic category in 2023. We also present demographic characteristics of all enrollees who received a

Part D covered vaccine with no cost-sharing and compare them to the distribution of all Part D enrollees (Appendix Tables A2 and A3).

A higher share of enrollees over age 65 received a Part D covered vaccine, including for RSV and shingles, than their counterparts under the age of 65. This is likely driven in part by differences in ACIP vaccine recommendations for different age groups. Similar shares of men and women received a Part D covered vaccine, including RSV and shingles vaccines.

Among enrollees whose race and ethnicity information was available, Non-Hispanic White (22 percent) enrollees had the highest share of enrollees accessing a Part D covered vaccine in 2023 compared to other racial and ethnic groups, followed by Asian enrollees (21 percent). Non-Hispanic White enrollees also had higher proportions of enrollees receiving RSV and shingles vaccines than most other racial and ethnic groups, followed by Asian enrollees. Among Black and Hispanic enrollees, 13 percent and 14 percent received a Part D covered vaccine, respectively. Among both groups, about 6 percent each received the RSV vaccine. About 7 percent of Black and 8 percent of Hispanic Medicare Part D enrollees received the shingles vaccine. American Indian and Alaska Native enrollees had the lowest share accessing a Part D covered vaccine, including RSV and shingles (5 percent each), compared to other racial and ethnic groups.

Among all Part D enrollees, a higher share of non-LIS enrollees received a vaccine in 2023 (23 percent) than LIS enrollees (11 percent). Among other factors, differences in age between the two groups may be contributing to this finding. Existing research finds that about 41 percent of LIS enrollees are ages 64 or younger, which means fewer LIS enrollees are eligible for Part D vaccines due to different ACIP recommendations for younger age groups.²⁰

Generally similar shares of urban and rural enrollees received a Part D vaccine, including RSV and shingles.

Table 2. Demographic Characteristics of Enrollees Receiving Any Medicare Part D Covered Vaccine with No Cost Sharing, 2023

Demographic Characteristics	Total Medicare Part D Enrollees	Percent of Part D Enrollees Receiving Vaccines		
		Any ^a	RSV ^a	Shingles ^a
Age				
Under 65 Years	6,126,612	8%	2%	5%
65 Years and Older	45,797,400	21%	14%	8%
Gender				
Male	22,559,828	19%	12%	7%
Female	29,364,185	20%	13%	8%
Race^b				
Non-Hispanic White	37,154,373	22%	14%	7%
Black	5,541,317	13%	6%	7%
Hispanic	5,406,191	14%	6%	8%
Asian/Pacific Islander	2,038,574	21%	11%	9%
Unknown Race	1,196,693	23%	16%	7%
Other Race	421,551	21%	13%	8%
American Indian/Alaska Native	165,314	11%	5%	5%
LIS Status				
LIS	14,353,221	11%	5%	5%
Non-LIS	37,570,791	23%	15%	8%
Geographic Area				
Urban	43,173,913	20%	13%	8%
Rural or Unknown	8,750,099	17%	10%	7%
Total	51,924,013	20%	13%	8%

Source: CMS OEDA analysis of the Medicare Prescription Drug Event (PDE) and Medicare enrollment data files. Notes: This sample is restricted to enrollees who received at least one vaccine at no cost that is covered under Part D.

^aDenominator is total number of Part D enrollees in each demographic category.

^bRace and ethnicity are identified using the Research Triangle Institute’s race variable, which is created by taking the beneficiary race code and applying an algorithm to correct for undercounting of some racial and ethnic groups.

Part D Enrollee Vaccine Use for Each State and Territory

We also examined the number and share of enrollees receiving a Part D covered vaccine with no out-of-pocket costs by state and territory (Table 3). Our estimates show that California, Florida, and Texas had the highest absolute number of enrollees who received a vaccine under Part D with no cost sharing. Based on their total Part D enrollment, Colorado, Nebraska, and Washington had the highest share of enrollees who received a Part D covered vaccine at 27 percent each, followed by Iowa, Minnesota, and South Dakota at 26 percent each.

Table 3. Total Number of Part D Enrollees Receiving a Part D Covered Vaccine with No Cost-Sharing in 2023, by State and Territory

Area of Residence	LIS Enrollees	Non-LIS Enrollees	Total Enrollees	Share of Part D Enrollees in Each State or Territory Receiving Any Part D Covered Vaccine ^a
Alabama	27,061	102,206	129,267	15%
Alaska	1,465	13,619	15,084	20%
Arizona	36,039	217,781	253,820	22%
Arkansas	16,847	70,468	87,315	17%
California	207,507	736,329	943,836	17%
Colorado	27,339	185,050	212,389	27%
Connecticut	27,308	102,605	129,913	22%
Delaware	4,542	39,272	43,814	24%
District of Columbia	3,578	7,458	11,036	18%
Florida	95,695	632,519	728,214	18%
Georgia	53,075	220,080	273,155	19%
Hawaii	7,144	40,986	48,130	22%
Idaho	6,498	51,668	58,166	20%
Illinois	53,906	354,355	408,261	22%
Indiana	33,021	199,960	232,981	21%
Iowa	15,609	126,830	142,439	26%
Kansas	11,842	97,866	109,708	25%
Kentucky	21,560	113,227	134,787	17%
Louisiana	25,793	79,482	105,275	14%
Maine	11,496	51,939	63,435	22%
Maryland	22,651	128,296	150,947	21%
Massachusetts	42,378	223,122	265,500	23%
Michigan	48,524	380,744	429,268	23%
Minnesota	21,422	211,109	232,531	26%
Mississippi	13,366	45,572	58,938	12%
Missouri	22,769	168,426	191,195	18%
Montana	4,174	34,828	39,002	21%
Nebraska	7,504	70,217	77,721	27%
Nevada	12,489	77,154	89,643	21%
New Hampshire	4,936	52,804	57,740	24%
New Jersey	27,162	198,603	225,765	17%
New Mexico	16,088	66,643	82,731	24%
New York	111,891	411,151	523,042	17%
North Carolina	48,953	312,081	361,034	21%
North Dakota	3,041	19,220	22,261	21%
Ohio	50,607	356,053	406,660	20%
Oklahoma	15,392	83,002	98,394	17%
Oregon	20,144	146,256	166,400	23%
Pennsylvania	60,264	389,462	449,726	19%

Area of Residence	LIS Enrollees	Non-LIS Enrollees	Total Enrollees	Share of Part D Enrollees in Each State or Territory Receiving Any Part D Covered Vaccine ^a
Rhode Island	5,398	34,391	39,789	21%
South Carolina	23,805	147,776	171,581	19%
South Dakota	4,018	32,151	36,169	26%
Tennessee	31,408	176,697	208,105	18%
Texas	126,504	593,390	719,894	20%
Utah	6,639	73,074	79,713	23%
Vermont	3,282	27,507	30,789	24%
Virginia	29,900	203,920	233,820	21%
Washington	36,215	251,716	287,931	27%
West Virginia	10,917	44,545	55,462	17%
Wisconsin	23,932	215,773	239,705	24%
Wyoming	1,630	15,117	16,747	20%
Puerto Rico	2,246	85,431	87,677	13%
Virgin Islands	14	870	884	8%
American Samoa	18	23	41	6%
Guam	*	*	153	5%
Northern Mariana Islands or Minor Outlying Islands	0	19	19	5%
Unknown State	*	*	709	7%
Total	1,547,000	8,722,000	10,269,000	20%

Source: CMS OEDA analysis of the Medicare Prescription Drug Event (PDE) and Medicare enrollment data files. Notes: This sample is restricted to enrollees who received at least one vaccine at no cost that is covered under Part D.

^aDenominator is the total number of Part D enrollees in each state or territory.

*Value suppressed due to <11 beneficiaries receiving a Part D covered vaccine at no cost or to prevent calculation of a value <11.

DISCUSSION

Findings show that 10.3 million enrollees received a Part D covered vaccine with no cost sharing in 2023. Previously, ASPE examined vaccine use under Part D in 2021 to understand how much enrollees would have saved in out-of-pocket costs if the IRA provisions had been in effect at that time. Our findings showed that in 2021, 3.4 million people received vaccines under Part D, most of which were for shingles (2.7 million), and paid a total of \$234 million in out-of-pocket costs for these vaccines.* In 2023, 3.9 million enrollees received a shingles vaccine, which is an increase of about 42 percent from 2021, and nearly 1.5 million enrollees received a Tdap vaccine, which is an increase of 114 percent from 2021.† Note that the total number of vaccinations in 2021 may have been lower than a more typical year due to the COVID-19 pandemic.

* Note that some Part D enrollees may have received a Part D covered vaccine with no cost sharing prior to the IRA vaccine provision going into effect. See [here](#) for more details.

† About 5.3 percent of the Part D population received a vaccination for shingles in 2021. This increased to about 7.5 percent of the Part D population in 2023. Note that this estimate does not represent rates of vaccine coverage for the Medicare Part D population because it only captures enrollees who received a Part D covered vaccine during the time period examined. Some enrollees may have received a Part D covered vaccine in prior years and would not be eligible for another dose. See “Methods” for more detail.

To get a general sense of approximate savings under the IRA's vaccine provision, we used the average out-of-pocket costs for vaccine users in 2021, updated to 2023 dollars, and applied this estimate to the total number of enrollees receiving vaccines in 2023. Based on this simple method, Part D enrollees who accessed a no cost vaccine would have spent about \$300 million in out-of-pocket costs for the shingles vaccine in 2023.* For all enrollees who received vaccines in 2023, excluding the new RSV vaccine, the out-of-pocket costs would have totaled about \$400 million if the IRA vaccine provision had not been in effect.

Although we cannot estimate how much enrollees would have paid for the RSV vaccine prior to the IRA if it had been available, 6.5 million enrollees received this vaccine free of charge under the IRA's vaccine provision.† The number of enrollees receiving this vaccine in under a year is likely driven both by the RSV vaccine awareness campaigns and the elimination of out-of-pocket costs associated with it, among other factors.²¹ However, there's concern that awareness of the availability of the vaccine is still low among older adults.^{22,23} Given that RSV infection has the potential to be severe in older populations who have underlying health conditions, awareness of the RSV vaccine and its availability at no cost is critical to promote its uptake. Receipt of the vaccine has the potential to reduce severe complications, avoidable hospitalizations, and health spending.

Increasing the availability and accessibility of Part D covered vaccines among Medicare enrollees has numerous potential benefits, including limiting the spread of infectious diseases, reducing the severity of disease as well as reducing health care utilization and health spending over time. Although out-of-pocket spending is one factor among many that affects whether individuals receive a recommended vaccine, the elimination of out-of-pocket costs, as the IRA has accomplished for ACIP-recommended adult vaccines covered under Part D, has been cited as a key intervention to improve vaccine uptake.²⁴ Reducing out-of-pocket costs will make it easier for enrollees to access vaccines, which in turn may prevent downstream consequences and serious complications that arise from vaccine preventable diseases.

* We calculated this figure by using the overall (LIS + non-LIS) average out-of-pocket spending per enrollee for vaccines for shingles, Tdap, and Td from previous ASPE analyses, updating to 2023 dollars, and applying the updated estimates to the 2023 estimates of use for each type of vaccine. For all other vaccines, we used the average out-of-pocket costs for 'others.' Please see [here](#) for the original estimates of average out-of-pocket spending for each vaccine (Table 4).

† The Kaiser Family Foundation (KFF) reports that the RSV vaccine may cost between \$180 to \$295 for one dose, but this is not equivalent to out-of-pocket spending per enrollee for this vaccine. Please see [here](#).

APPENDIX

Table A1. Common Vaccine Preventable Conditions and Recommendations for Older Adults for Vaccines Covered under Medicare Part D

Infectious Disease	Description of Infectious Disease	ACIP Vaccine Recommendations for Older Adults ^a
Respiratory Syncytial Virus (RSV)	A respiratory virus that usually causes mild cold-like symptoms, but some populations, including older adults, are at greater risk of severe infection, which can lead to complications such as bronchiolitis and pneumonia. ²⁵	A single dose of an RSV vaccine for adults ages 60 and older with shared clinical decision making between individuals and health care providers so that vaccination is targeted to those at the highest risk of severe RSV disease. ²⁶
Shingles (Herpes Zoster)	A painful and debilitating viral infection that can cause a rash and nerve pain throughout the body. The infection can be especially severe for those at higher risk (for example, immunocompromised individuals). ²⁷	Two doses for individuals ages 50 and older. ²⁸
Tetanus, Diphtheria, and Pertussis	<p>Tetanus is a bacterial, life-threatening infection that can cause nerve pain throughout the body, painful muscle spasms, paralysis, and even death.²⁹</p> <p>Diphtheria is a bacterial infection that can cause severe sore throat, throat swelling, and difficulty breathing; complications can lead to kidney, heart, and nerve damage.³⁰</p> <p>Pertussis, also known as whooping cough, is a bacterial infection that can cause violent bouts of coughing. Complications include pneumonia.³¹</p>	One dose of Tdap, which provides protection from tetanus, diphtheria, and pertussis, and then Td or Tdap every 10 years. ³²

Source: ASPE review of [ACIP Vaccine Recommendations | CDC](#)

Notes: ^aTable does not include additional recommendations for vaccines that are recommended to older adults after potential high-risk exposure to pathogen.

Tdap = Tetanus, diphtheria, and acellular pertussis vaccine

Td = Tetanus and diphtheria vaccine

Table A2. Demographic Characteristics of Enrollees Receiving Any Medicare Part D Covered Vaccine with No Cost Sharing Compared to Medicare Part D Population, 2023

Demographic Characteristics	Total Medicare Part D Enrollees		Enrollees Receiving Any Part D Vaccine with No Cost Sharing ^a	
	N	%	N	%
Overall	51,924,013	100%	10,268,711	100
Age				
Under 65 Years	6,126,612	12%	502,968	5%
65 Years and Over	45,797,400	88%	9,765,743	95%
Gender				
Male or Unknown	22,559,828	43%	4,381,489	43%
Female	29,364,185	57%	5,887,222	57%
Race ^b				
Non-Hispanic White	37,154,373	72%	7,993,293	78%
Black	5,541,317	11%	706,109	7%
Asian/Pacific Islander	2,038,574	4%	418,143	4%
Hispanic	5,406,191	10%	762,060	7%
American Indian/Alaska Native	165,314	<1%	18,291	<1%
Other Race	421,551	1%	89,834	1%
Unknown Race	1,196,693	2%	280,981	3%
Low-Income Subsidy (LIS) Status				
LIS	14,353,221	28%	1,547,091	15%
Non-LIS	37,570,791	72%	8,721,620	85%
Geographic Area				
Urban	43,173,913	83%	8,748,627	85%
Rural or Unknown	8,750,099	17%	1,520,084	15%

Source: CMS OEDA analysis of the Medicare Prescription Drug Event (PDE) and Medicare enrollment data files.

Notes: This sample is restricted to enrollees who received at least one vaccine at no cost that is covered under Part D.

^aDenominator is total number of enrollees who received a Part D covered vaccine.

^bRace and ethnicity are identified using the Research Triangle Institute's race variable, which is created by taking the beneficiary race code and applying an algorithm to correct for undercounting of some racial and ethnic groups.

Table A3. Demographic Characteristics of Enrollees Receiving the RSV and Shingles Vaccines with No Cost Sharing Compared to Medicare Part D Population, 2023

Demographic Characteristics	Total Medicare Part D Enrollees		Enrollees Receiving RSV Vaccine with No Cost Sharing ^a		Enrollees Receiving a Shingles Vaccine with No Cost Sharing ^a	
	N	%	N	%	N	%
Age						
Under 65 Years	6,126,612	12%	135,447	2%	298,794	8%
65 Years and Older	45,797,400	88%	6,380,847	98%	3,596,003	92%
Gender						
Male	22,559,828	43%	2,768,858	42%	1,682,433	43%
Female	29,364,185	57%	3,747,436	58%	2,212,364	57%
Race and Ethnicity ^b						
Non-Hispanic White	37,154,373	72%	5,383,670	83%	2,778,313	71%
Black	5,541,317	11%	328,602	5%	378,283	10%
Asian/Pacific Islander	2,038,574	4%	229,516	4%	174,886	4%
Hispanic	5,406,191	10%	313,172	5%	434,518	11%
American Indian/Alaska Native	165,314	<1%	8,739	<1%	8,717	<1%
Other Race	421,551	1%	56,808	1%	32,435	1%
Unknown Race	1,196,693	2%	195,787	3%	87,645	2%
Low Income Subsidy (LIS) Status						
LIS	14,353,221	28%	709,924	11%	783,329	20%
Non-LIS	37,570,791	72%	5,806,370	89%	3,111,468	80%
Geographic Area						
Urban	43,173,913	83%	5,601,115	86%	3,248,582	83%
Rural or Unknown	8,750,099	17%	915,179	14%	646,215	17%

Source: CMS OEDA analysis of the Medicare Prescription Drug Event (PDE) and Medicare enrollment data files.

Notes: This sample is restricted to enrollees who received at least one RSV vaccine for the RSV column and one shingles vaccine for the shingles column at no cost under Part D.

RSV = Respiratory Syncytial Virus

^aDenominator is total number of enrollees who received the RSV or shingles vaccine, depending on the column.

^bRace and ethnicity are identified using the Research Triangle Institute's race variable, which is created by taking the beneficiary race code and applying an algorithm to correct for undercounting of some racial and ethnic groups.

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