

MARCH 2010

A DATA BOOK

Medicare Part D Program

MEDPAC Medicare
Payment Advisory
Commission

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Chart 1. Characteristics of Part D enrollees, 2007

	All Medicare	Part D	Plan type		Subsidy status	
			PDP	MA-PD	LIS	Non-LIS
Beneficiaries ¹ (in millions)	46.5	26.1	18.3	7.8	10.4	15.7
Percent of all Medicare	100%	56%	39%	17%	22%	34%
Gender						
Male	44%	40%	39%	43%	38%	41%
Female	56	60	61	57	62	59
Race/ethnicity						
White, non-Hispanic	78	74	76	71	59	84
African American, non-Hispanic	10	11	12	10	20	6
Hispanic	8	10	8	14	14	7
Asian	2	3	3	3	5	2
Other	2	2	2	1	2	1
Age (years)						
<65	21	23	26	16	40	12
65–69	22	21	19	23	14	25
70–74	18	18	16	21	13	21
75–79	16	15	15	18	12	18
80+	23	23	23	22	21	24
Average risk score ²	1.022	1.071	1.098	1.009	1.164	1.010
Percent relative to all Part D		100%	102%	94%	109%	94%

Note: PDP (prescription drug plan), MA-PD (Medicare Advantage-Prescription Drug [plan]), LIS (low-income subsidy). Totals may not sum to 100 percent due to rounding.

¹Figures for Medicare and Part D include all beneficiaries with at least one month of enrollment in the respective program. A beneficiary is classified as LIS if that individual received Part D's LIS at some point during the year. If a beneficiary was enrolled in both a PDP and an MA-PD plan during the year, that individual was classified into the type of plan with a greater number of months of enrollment.

²Part D risk scores are calculated by CMS using the prescription drug hierarchical condition category model developed before 2006. Risk scores shown here are not adjusted for LIS or institutionalized status (multipliers) and are not normalized (i.e., average across all Medicare beneficiaries does not equal 1.0).

Source: MedPAC analysis of Medicare Part D denominator and enrollment files from CMS.

- In 2007, 26.1 million Medicare beneficiaries (56 percent) were enrolled in Part D at some point during the year. Most of them (18.3 million) were in stand-alone prescription drug plans (PDPs), with 7.8 million in MA-PDs. About 10.4 million enrollees received Part D's LIS. An additional 7.4 million beneficiaries were in employer-sponsored plans that receive Medicare's retiree drug subsidy.
- Compared with the overall Medicare population, enrollees in Part D are more likely to be female and non-White. Compared with PDP enrollees, beneficiaries enrolled in MA-PDs are less likely to be disabled beneficiaries under age 65 and more likely to be Hispanic, which may reflect the underlying demographic characteristics of areas where MA-PD plans are located.
- LIS enrollees are more likely to be female, non-White, and disabled beneficiaries under age 65 (40 percent), while non-LIS enrollees are more likely to be White (84 percent) and over age 65.
- The average risk score for PDP enrollees is higher (1.098) than the average for all Part D enrollees (1.071), while the average risk score for MA-PD enrollees is lower (1.009). The average risk score for LIS enrollees is 9 percent higher than the average for all Part D enrollees.

Chart 2. Characteristics of LIS and non-LIS enrollees, by type of plan, 2007

	Part D	PDP		MA-PD	
		LIS	Non-LIS	LIS	Non-LIS
Beneficiaries ¹ (in millions)	26.1	8.9	9.4	1.5	6.3
Percent of all Part D	100%	34%	36%	6%	24%
Gender					
Male	40%	39%	40%	35%	44%
Female	60	61	60	65	56
Race/ethnicity					
White, non-Hispanic	74	60	90	54	75
African American, non-Hispanic	11	19	4	21	8
Hispanic	10	13	3	19	13
Asian	3	5	1	4	3
Other	2	2	1	1	1
Age (years)					
<65	23	42	11	28	13
65–69	21	14	25	17	25
70–74	18	12	20	17	22
75–79	15	11	18	15	18
80+	23	21	26	23	22
Average risk score ²	1.071	1.168	1.031	1.138	0.978
Percent relative to all Part D	100%	109%	96%	106%	91%

Note: LIS (low-income subsidy), PDP (prescription drug plan), MA-PD (Medicare Advantage–Prescription Drug [plan]). Totals may not sum to 100 percent due to rounding.

¹Figures for Medicare and Part D include all beneficiaries with at least one month of enrollment in the respective program. A beneficiary is classified as LIS if that individual received Part D's LIS at some point during the year. If a beneficiary was enrolled in both a PDP and an MA-PD plan during the year, that individual was classified into the type of plan with a greater number of months of enrollment.

²Part D risk scores are calculated by CMS using the prescription drug hierarchical condition category model developed before 2006. Risk scores shown here are not adjusted for LIS or institutionalized status (multipliers) and are not normalized (i.e., average across all Medicare beneficiaries does not equal 1.0).

Source: MedPAC analysis of Medicare Part D denominator and enrollment files from CMS.

- In 2007, of the 10.4 million enrollees receiving the LIS, most (8.9 million) were in stand-alone PDPs, while 1.5 million were in MA-PDs.
- PDP enrollees are close to evenly divided between those who receive the LIS (8.9 million) and those who do not (9.4 million). Far fewer MA-PD enrollees receive the LIS (1.5 million compared with 6.3 million).
- Minority populations are over-represented among enrollees who receive the LIS in PDPs and MA-PDs compared with all Part D enrollees.
- On average, LIS enrollees in MA-PDs are healthier than LIS enrollees in PDPs, with an average risk score of 1.138 compared with 1.168. Similarly, non-LIS enrollees in MA-PDs are healthier on average than those in PDPs, with an average risk score of 0.978 compared with 1.031.

Chart 3. Characteristics of Part D enrollees, by urbanicity, 2007

	Part D	CBSA designation		
		Metropolitan	Micropolitan	Rural
Beneficiaries ¹ (in millions)	26.1	20.5	3.2	2.4
Percent of all Part D	100%	79%	12%	9%
Gender				
Male	40%	40%	40%	41%
Female	60	60	60	59
Race				
White, non-Hispanic	74	71	85	87
African American, non-Hispanic	11	12	8	8
Hispanic	10	11	3	2
Asian	3	4	1	0
Other	2	2	2	2
Age (years)				
<65	23	23	26	25
65–69	21	21	21	21
70–74	18	18	17	17
75–79	15	16	15	15
80+	23	23	22	22
Average risk score ²	1.071	1.076	1.068	1.040
Percent relative to all Part D	100%	100%	100%	97%

Note: CBSA (core-based statistical area). A metropolitan area contains a core urban area of 50,000 or more population, and a micropolitan area contains an urban core of at least 10,000 (but less than 50,000) population. Less than 1 percent of Medicare beneficiaries were excluded from the analysis due to an unidentifiable CBSA designation. Totals may not sum to 100 percent due to rounding.

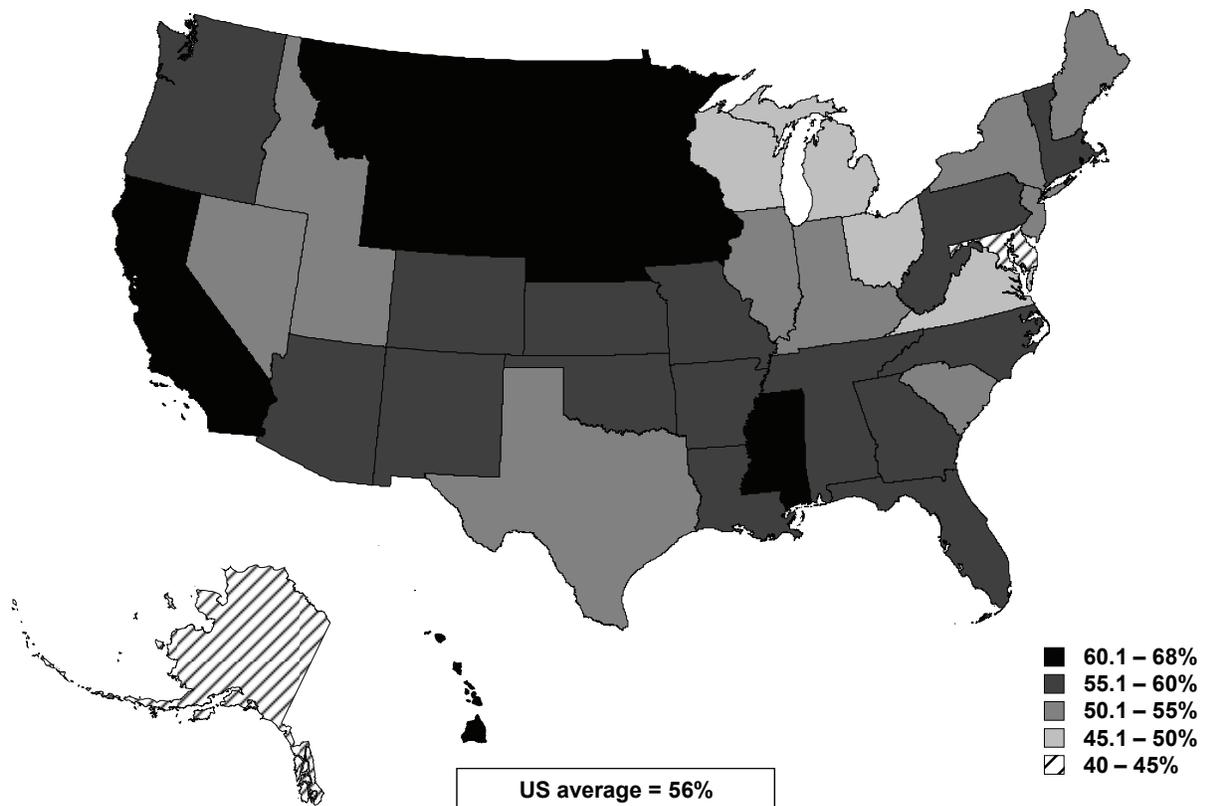
¹Enrollment figures include all beneficiaries with at least one month of enrollment in the Part D program.

²Part D risk scores are calculated by CMS using a hierarchical condition category model developed before 2006. Risk scores shown here are not adjusted for low-income subsidy or institutionalized status (multipliers) and are not normalized (i.e., average across all Part D enrollees does not equal 1.0).

Source: MedPAC analysis of Medicare Part D denominator and enrollment files from CMS.

- In 2007, of the 26.1 million Medicare beneficiaries enrolled in Part D plans, 79 percent (20.5 million) were in metropolitan areas, 12 percent (3.2 million) were in micropolitan areas, and the remaining 9 percent (2.4 million) were in rural areas of the states. Compared with the overall Medicare population, a larger share of Part D enrollees were in metropolitan areas. In 2006, 76 percent of Medicare beneficiaries were in metropolitan areas.
- Part D enrollees in micropolitan and rural areas of the states are more likely to be White (85 percent and 87 percent, respectively) than enrollees in metropolitan areas (71 percent) and are slightly more likely to be disabled (under age 65) compared with those in metropolitan areas (26 percent and 25 percent vs. 23 percent).
- On average, enrollees in rural areas of the states have a lower risk score (1.040) compared with enrollees in metropolitan and micropolitan areas (1.076 and 1.068, respectively).

Chart 4. Share of Medicare beneficiaries enrolled in Part D by region, 2007

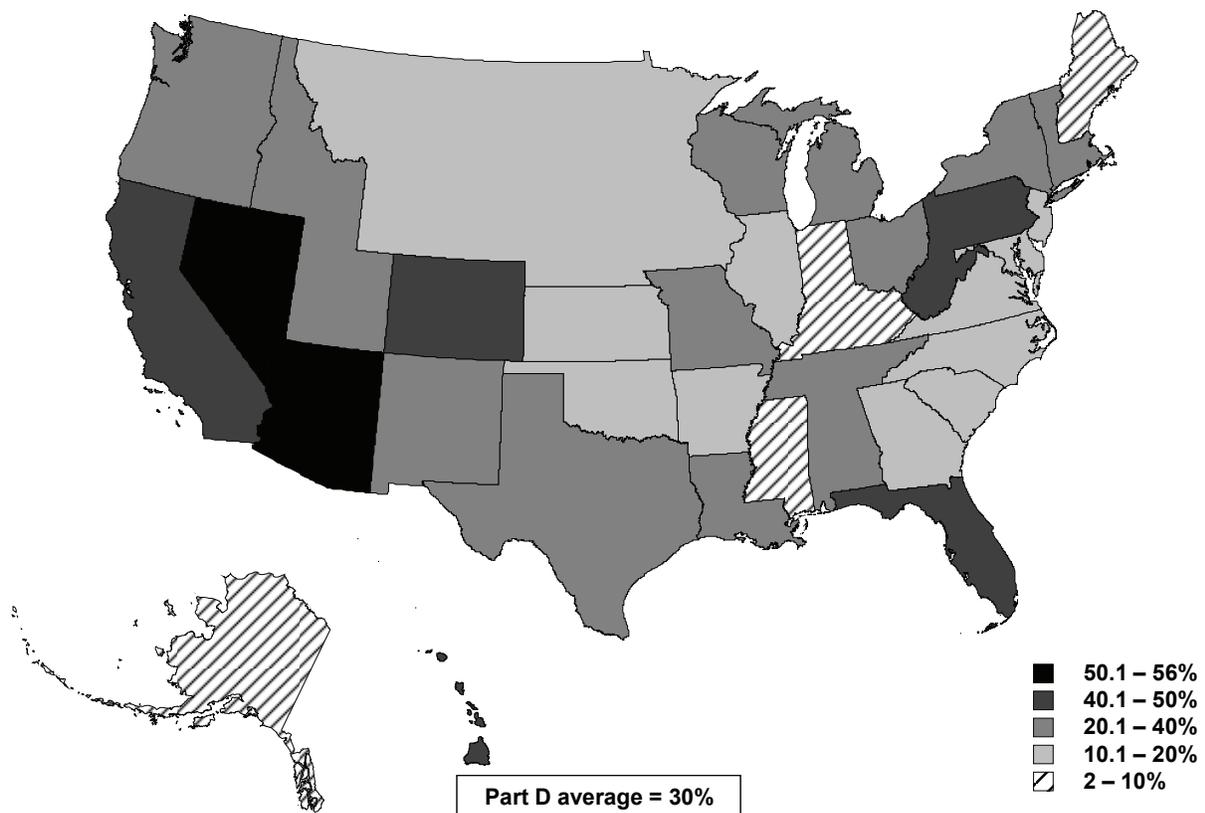


Note: Definition of regions based on prescription drug plan regions used in Part D.

Source: MedPAC analysis of Part D enrollment data from CMS.

- Among Part D regions, in 2007, between 40 percent and 68 percent of all Medicare beneficiaries enrolled in Part D.
- Enrollment was the highest, at 68 percent, in Region 32 (California) and lowest in Region 34 (Alaska), at only 40 percent.
- In 2007, 7.4 million Medicare beneficiaries (16 percent) had employer-sponsored prescription drug coverage and received Medicare's retiree drug subsidy (RDS). Beneficiaries were more likely to enroll in Part D in regions where a low take-up rate for the RDS was observed. For example, in Region 32 (California) and Region 33 (Hawaii), the shares of Medicare beneficiaries enrolled in Part D were 68 percent and 65 percent, respectively. In these two regions, 10 percent or fewer (not shown) were enrolled in employer-sponsored plans that received the RDS.
- Medicare beneficiaries are less likely to enroll in Part D in Region 13 (Michigan) and Region 14 (Ohio), where roughly 30 percent of Medicare beneficiaries are in employer-sponsored plans that received the RDS.

Chart 5. Share of Part D enrollees in MA–PD plans by region, 2007

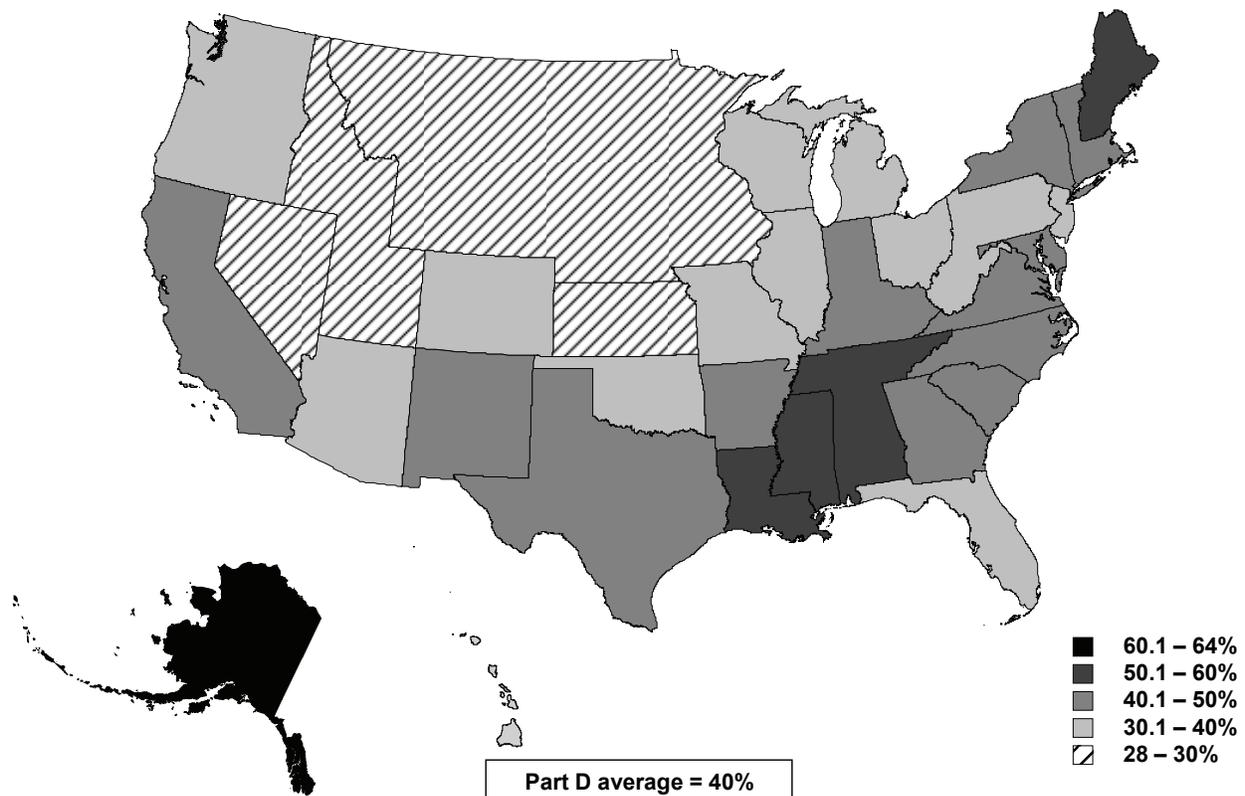


Note: MA–PD (Medicare Advantage–Prescription Drug [plan]). Definition of regions based on prescription drug plan regions used in Part D.

Source: MedPAC analysis of Medicare Part D enrollment data from CMS.

- In 2007, a wide variation was seen in the shares of Part D enrollees who enrolled in MA–PDs across prescription drug plan regions. The patterns are generally consistent with enrollment in Medicare Advantage plans.
- Region 1 (Maine and New Hampshire) and Region 34 (Alaska) had the lowest shares, with 3 percent and 2 percent enrolled in MA–PDs, respectively. In two regions, Region 28 (Arizona) and Region 29 (Nevada), the shares of MA–PD enrollees were greater than 50 percent.

Chart 6. Share of Part D enrollees receiving the low-income subsidy by region, 2007

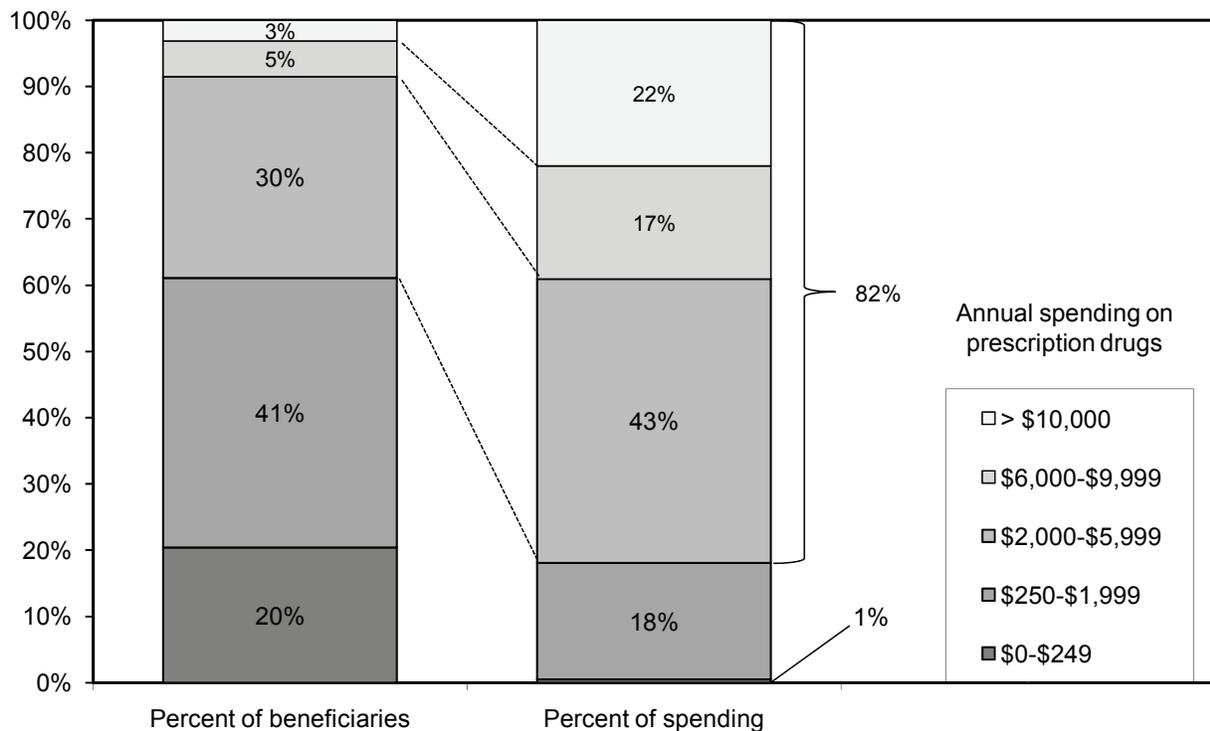


Note: Definition of region based on prescription drug plan regions used in Part D.

Source: MedPAC analysis of Medicare Part D enrollment data from CMS.

- In 2007, the share of Part D enrollees receiving the low-income subsidy (LIS) ranged from 28 percent in Region 25 (Iowa, Minnesota, Montana, North Dakota, Nebraska, South Dakota, and Wyoming) to 64 percent in Region 34 (Alaska).
- In 25 of 34 prescription drug plan regions, LIS enrollees account for 30 percent to 50 percent of enrollment.
- LIS enrollees account for more than half of Part D enrollment in Region 1 (Maine and New Hampshire), Region 12 (Alabama and Tennessee), Region 20 (Mississippi), Region 21 (Louisiana), and Region 34 (Alaska).

Chart 7. The majority of Part D spending is incurred by fewer than half of all Part D enrollees, 2007



Note: Numbers may not sum to 100 percent due to rounding.

Source: MedPAC analysis of Medicare Part D prescription drug event data from CMS.

- Medicare Part D spending is concentrated among a subset of beneficiaries. In 2007, 38 percent of Part D enrollees had annual spending of \$2,000 or more and accounted for 82 percent of total Part D spending.
- The costliest 8 percent of beneficiaries accounted for 39 percent of drug spending. This spending is less concentrated than Medicare Part A and Part B spending. In 2006, the costliest 5 percent of beneficiaries accounted for 43 percent of annual Medicare fee-for-service (FFS) spending and the costliest quartile accounted for 86 percent of Medicare FFS spending.

Chart 8. Characteristics of Part D enrollees, by spending levels, 2007

	Annual spending		
	<\$2,000	\$2,000–\$6,000	>\$6,000
Sex			
Male	42%	36%	38%
Female	58	64	62
Race/ethnicity			
White, non-Hispanic	73	76	74
African American, non-Hispanic	11	10	13
Hispanic	10	9	9
Other	5	4	5
Age (years)			
<65	22	20	46
65–69	23	19	13
70–74	18	18	12
75–80	15	17	11
80+	22	27	18
LIS status ¹			
LIS	33	43	76
Non-LIS	67	57	24
Plan type ²			
PDP	65	76	86
MA–PD	35	24	14

Note: LIS (low-income subsidy), PDP (prescription drug plan), MA–PD (Medicare Advantage–Prescription Drug [plan]). A small number of beneficiaries were excluded from the analysis due to missing data. Totals may not sum to 100 percent due to rounding.

¹A beneficiary is assigned LIS status if that individual received Part D's LIS at some point during the year.

²If a beneficiary was enrolled in both PDP and MA–PD plans during the year, that individual was classified into the type of plan with a greater number of months of enrollment.

Source: MedPAC analysis of Medicare Part D prescription drug events data and Part D denominator file from CMS.

- In 2007, beneficiaries with annual spending of more than \$6,000 were more likely to be female compared to beneficiaries with annual spending below \$2,000.
- Beneficiaries with annual spending greater than \$6,000 are more likely to be disabled beneficiaries under 65 and receive the LIS compared with those with annual spending below \$2,000. Nonelderly disabled beneficiaries tend to have lower incomes and therefore many are eligible to receive the LIS.
- Most beneficiaries with spending greater than \$6,000 are enrolled in stand-alone PDPs (86 percent) compared with MA–PDs (14 percent). Beneficiaries with annual spending below \$2,000, on the other hand, are more likely to be in MA–PDs compared with those with higher annual spending (35 percent compared with 14 percent). This finding reflects the fact that most LIS enrollees are more costly on average and are in PDPs.

Chart 9. Part D spending and utilization per enrollee, 2007

	Part D	Plan type		LIS status	
		PDP	MA-PD	LIS	Non-LIS
Total gross spending (billions)	\$62.2	\$48.9	\$13.3	\$34.2	\$28.0
Total number of prescriptions ¹ (millions)	1,146	843	302	529	617
Average spending per prescription	\$54	\$58	\$44	\$65	\$45
Per enrollee per month					
Total spending	\$212	\$239	\$151	\$301	\$156
Out-of-pocket spending ²	39	40	36	7	59
Plan liability ³	124	136	98	168	96
Low-income cost sharing subsidy	49	62	17	125	N/A
Number of prescriptions ¹	3.9	4.1	3.4	4.6	3.4

Note: PDP (prescription drug plan), MA-PD (Medicare Advantage-Prescription Drug [plan]), LIS (low-income subsidy), N/A (not applicable). Part D prescription drug event (PDE) records are classified into plan types based on the contract identification on each record. For purposes of classifying the PDE records by LIS status, monthly LIS eligibility information in Part D's denominator file was used. Estimates are sensitive to the method used to classify PDE records to each plan type and LIS status.

¹Number of prescriptions standardized to a 30-day supply.

²Out-of-pocket (OOP) spending includes all payments that count toward the annual OOP spending threshold.

³Plan liability includes plan payments for both covered and noncovered drugs.

Source: MedPAC analysis of Medicare Part D PDE data and denominator file from CMS.

- In 2007, gross spending on drugs for the Part D program totaled \$62.2 billion, with nearly 80 percent (\$48.9 billion) accounted for by Medicare beneficiaries enrolled in PDPs. Part D enrollees receiving the LIS accounted for nearly 55 percent (\$34.2 million) of the total. The number of prescriptions taken by Part D enrollees totaled 1.1 billion, with 74 percent (843 million) accounted for by PDP enrollees. The 40 percent of enrollees who received the LIS accounted for about 46 percent (529 million) of the total number of prescriptions filled.
- Medicare beneficiaries enrolled in Part D plans fill 3.9 prescriptions at \$212 per month on average. PDP enrollees have higher average monthly spending and more prescriptions filled compared with MA-PD enrollees.
- The average monthly plan liability for MA-PD enrollees (\$98) is considerably lower than that of PDP enrollees (\$136), while average monthly OOP spending is similar for enrollees in both types of plans (\$36 vs. \$40). The average monthly low-income cost sharing subsidy is much lower for MA-PD enrollees (\$17) compared with PDP enrollees (\$62). Most of that difference likely reflects the much smaller share of enrollment accounted for by LIS enrollees in MA-PDs compared with PDPs.
- Average monthly spending per enrollee for an LIS enrollee (\$301) is nearly double that of a non-LIS enrollee (\$156), while the average number of prescriptions filled per month by an LIS enrollee is 4.6 compared with 3.4 for a non-LIS enrollee. LIS enrollees have much lower OOP spending, on average, compared with non-LIS enrollees (\$7 vs. \$59). Part D's LIS pays for most of the cost sharing for LIS enrollees, averaging \$125 per month.

Chart 10. Part D spending and utilization per enrollee, by urbanicity, 2007

	Part D	CBSA designation		
		Metropolitan	Micropolitan	Rural
Total gross spending (billions)	\$62.2	\$48.9	\$7.7	\$5.5
Total number of prescriptions ¹ (millions)	1,146	889	146	109
Average spending per prescription	\$54	\$55	\$53	\$51
Per enrollee per month				
Total spending	\$212	\$212	\$216	\$209
Out-of-pocket spending ²	39	39	39	37
Plan liability ³	124	126	124	118
Low-income cost sharing subsidy	49	47	54	53
Number of prescriptions ¹	3.9	3.9	4.1	4.1

Note: CBSA (core-based statistical area). A metropolitan area contains a core urban area of 50,000 or more population, and a micropolitan area contains an urban core of at least 10,000 (but less than 50,000) population. Less than 1 percent of the prescription drug event (PDE) records were excluded from the analysis because the CBSA designation could not be identified.

¹Number of prescriptions standardized to a 30-day supply.

²Out-of-pocket (OOP) spending includes all payments that count toward the annual OOP spending threshold.

³Plan liability includes plan payments for both covered and noncovered drugs.

Source: MedPAC analysis of Medicare Part D PDE data and denominator files from CMS.

- Medicare beneficiaries residing in metropolitan areas account for 79 percent of spending (\$48.9 billion) and 78 percent of prescriptions (889 million) for drugs covered by Part D plans, while beneficiaries residing in micropolitan areas and rural areas of the states account for about 12 percent (\$7.7 billion) and 9 percent (\$5.5 billion) of spending, respectively, and 13 percent (146 million) and 10 percent (109 million) of prescriptions dispensed to Part D enrollees, respectively.
- In 2007, there was very little variation in average monthly spending per enrollee and average number of prescriptions dispensed per enrollee across areas with different urbanicity. The proportion of Part D spending for drugs and numbers of prescriptions filled by enrollees in metropolitan, micropolitan, and rural areas was nearly the same as their shares of Part D enrollment (see Chart 3).

Chart 11. Part D risk scores vary across regions, by plan type and by LIS status, 2007

PDP region	State(s)	Percent enrolled in PDPs vs. MA-PDs	Percent of Part D enrollees receiving LIS	Average risk score (RxHCC)				
				Part D	PDP	MA-PD	LIS	Non-LIS
All regions				Average absolute risk score				
				1.071	1.098	1.009	1.164	1.010
				Average normalized risk score (mean = 1.0)				
1	ME, NH	97%	52%	0.995	0.974	0.969	0.973	0.984
2	CT, MA, RI, VT	73	43	1.016	1.011	1.021	1.019	1.004
3	NY	65	49	1.035	1.052	1.016	1.018	1.027
4	NJ	84	37	1.048	1.044	0.993	1.041	1.060
5	DE, DC, MD	88	44	1.045	1.026	1.066	1.042	1.038
6	PA, WV	57	34	1.015	1.024	1.030	1.010	1.032
7	VA	87	41	1.011	0.997	0.998	1.007	1.013
8	NC	82	46	1.019	1.013	0.992	1.018	1.003
9	SC	85	49	1.027	1.013	1.022	1.003	1.026
10	GA	86	47	1.031	1.018	1.018	1.014	1.028
11	FL	58	35	1.051	1.068	1.053	1.063	1.055
12	AL, TN	76	51	1.041	1.028	1.063	1.020	1.030
13	MI	70	40	1.010	1.023	0.975	1.018	1.005
14	OH	68	39	1.040	1.049	1.026	1.060	1.027
15	IN, KY	91	44	1.026	1.009	1.008	1.018	1.022
16	WI	76	36	0.960	0.958	0.945	0.988	0.952
17	IL	89	39	0.992	0.978	0.965	0.988	0.997
18	MO	75	37	1.005	1.007	0.982	1.026	0.999
19	AR	88	48	0.998	0.985	0.975	0.971	1.003
20	MS	95	56	1.004	0.984	0.988	0.966	1.004
21	LA	74	52	1.021	1.020	1.012	0.991	1.020
22	TX	77	48	1.028	1.024	1.016	1.015	1.018
23	OK	83	40	0.991	0.979	0.988	0.982	0.999
24	KS	90	30	0.969	0.954	0.950	0.985	0.982
25	IA, MN, MT, NE, ND, SD, WY	80	28	0.921	0.905	0.951	0.957	0.928
26	NM	63	45	0.904	0.933	0.866	0.901	0.895
27	CO	51	30	0.917	0.918	0.946	0.941	0.924
28	AZ	44	32	0.947	0.933	0.999	0.945	0.964
29	NV	47	29	0.944	0.957	0.966	0.955	0.961
30	OR, WA	68	32	0.917	0.910	0.938	0.926	0.927
31	ID, UT	74	30	0.913	0.906	0.923	0.928	0.926
32	CA	53	40	0.945	0.975	0.937	0.947	0.942
33	HI	52	30	0.941	0.931	0.984	0.913	0.975
34	AK	98	64	0.945	0.922	1.032	0.908	0.925
	Mean	70	40	1.000	1.000	1.000	1.000	1.000
	Minimum	44	28	0.904	0.905	0.866	0.901	0.895
	Maximum	98	64	1.051	1.068	1.066	1.063	1.060

Note: LIS (low-income subsidy), PDP (prescription drug plan), MA-PD (Medicare Advantage-Prescription Drug [plan]), RxHCC (prescription drug hierarchical condition category). Analysis based on enrollment as of July 2007. Part D risk scores are calculated by CMS using the RxHCC model developed before 2006. Risk scores shown here are not adjusted for LIS or institutionalized status (multipliers) and are normalized so that average across Part D enrollees in each group equals 1.0. If a beneficiary was enrolled in both a PDP and an MA-PD plan during the year, that individual was classified into the type of plan with a greater number of months of enrollment.

Source: MedPAC analysis of Medicare enrollment files from CMS.

(Chart continued next page)

Chart 11. Part D risk scores vary across regions, by plan type and by LIS status, 2007 (continued)

- Under Part D, payments to stand-alone PDPs and MA–PDs are adjusted to account for differences in enrollees' expected costs using the RxHCC model developed before 2006. The RxHCC model uses age, gender, disability status, and medical diagnosis to predict Part D benefit spending. As is true for any risk-adjustment model, the RxHCC model does not explain all variation in future payments. The model may also produce higher scores in areas with high service use because there are more opportunities to make diagnoses in those areas and the RxHCC model uses diagnoses among other factors in its score.
- In 2007, the normalized average risk scores for Part D enrollees varied from 0.904 in New Mexico (Region 26) to 1.051 in Florida (Region 11), meaning that costs per enrollee, on average, are expected to be about 10 percent below the national average in New Mexico and about 5 percent above the national average in Florida.
- The overall average risk score for PDP enrollees (1.098) is higher compared with that of MA–PD enrollees (1.009) and is consistently so across all regions, except in Alaska (Region 34) where only 2 percent of the beneficiaries are enrolled in MA–PDs. In contrast, normalized risk scores for both PDP and MA–PD enrollees are similar in most regions, with the difference exceeding 0.05 (5 percentage points) in only five regions: New Jersey (Region 4), New Mexico (Region 26), Arizona (Region 28), Hawaii (Region 33), and Alaska (Region 34).
- The overall average risk score for enrollees receiving the LIS (1.164) is higher than that of non-LIS enrollees (1.010) and is consistently so across all regions. In contrast, normalized risk scores for both LIS and non-LIS enrollees are similar in most regions, with the difference exceeding 0.05 (5 percentage points) only in Hawaii (Region 33), where a relatively small share of enrollees receive the LIS (30 percent).

Chart 12. Part D spending varies across regions even after controlling for prices and health status, 2007

PDP region	State(s)	Percent enrolled in PDPs vs. MA-PDs	Percent of Part D enrollees receiving LIS	Relative average Part D spending per capita ¹	
				Unadjusted	Adjusted ²
1	ME, NH	97%	52%	1.00	0.94
2	CT, MA, RI, VT	73	43	1.06	1.04
3	NY	65	49	1.18	1.07
4	NJ	84	37	1.25	1.19
5	DE, DC, MD	88	44	1.09	1.00
6	PA, WV	57	34	1.01	1.04
7	VA	87	41	1.01	1.02
8	NC	82	46	1.12	1.08
9	SC	85	49	1.09	1.02
10	GA	86	47	1.04	0.97
11	FL	58	35	0.97	0.90
12	AL, TN	76	51	1.06	0.96
13	MI	70	40	1.07	1.05
14	OH	68	39	1.02	0.98
15	IN, KY	91	44	1.09	1.05
16	WI	76	36	1.00	1.07
17	IL	89	39	0.98	1.03
18	MO	75	37	1.01	1.03
19	AR	88	48	0.94	0.93
20	MS	95	56	1.03	0.95
21	LA	74	52	1.08	1.02
22	TX	77	48	0.99	0.96
23	OK	83	40	1.04	1.06
24	KS	90	30	0.97	1.06
25	IA, MN, MT, NE, ND, SD, WY	80	28	0.89	1.05
26	NM	63	45	0.75	0.84
27	CO	51	30	0.84	0.98
28	AZ	44	32	0.75	0.87
29	NV	47	29	0.78	0.93
30	OR, WA	68	32	0.89	1.01
31	ID, UT	74	30	0.92	1.07
32	CA	53	40	0.93	0.99
33	HI	52	30	0.89	1.00
34	AK	98	64	1.43	1.17
	Mean	70	40	1.00	1.00
	Minimum	44	28	0.75	0.84
	Maximum	98	64	1.43	1.19
National average spending				\$2,391	N/A

Note: PDP (prescription drug plan), MA-PD (Medicare Advantage-Prescription Drug [plan]), LIS (low-income subsidy), N/A (not available).
¹Spending includes payments for ingredient costs and dispensing fees. Figures (per capita spending and index values) are for beneficiaries residing in a community setting only.
²Adjusted spending controls for regional differences in prices, demographic characteristics (such as age, gender, disability, and low-income subsidy status), and beneficiaries' health status as measured by medical diagnoses used for prescription drug hierarchical condition categories.

Source: Centers for Medicare & Medicaid Services, Department of Health and Human Services. 2009. *Geographic variation in drug prices and spending in the Part D program*. Baltimore, MD: CMS. http://www.cms.hhs.gov/reports/downloads/MaCurdy_RxGeoPrice_RTC_2009.pdf.

- Average per capita drug spending for drugs under Part D varies widely across PDP regions. The national average per capita spending was \$2,391 in 2007. Relative to the national average, the unadjusted regional average per capita spending ranges from 75 percent (0.75) in New Mexico (Region 26) and Arizona (Region 28) to 143 percent (1.43) in Alaska (Region 34).
- Adjusting per capita drug spending for regional differences in prices and beneficiaries' health status reduces the variation across PDP regions: After the adjustment, the difference between minimum and maximum decreases from 0.68 (1.43 minus 0.75) to 0.35 (1.19 minus 0.84). Relative to the national average, the adjusted average per capita spending ranges from 84 percent (0.84) in New Mexico (Region 26) to 119 percent (1.19) in New Jersey (Region 4).

Chart 13. Top 15 therapeutic classes of drugs under Part D, by spending and volume, 2007

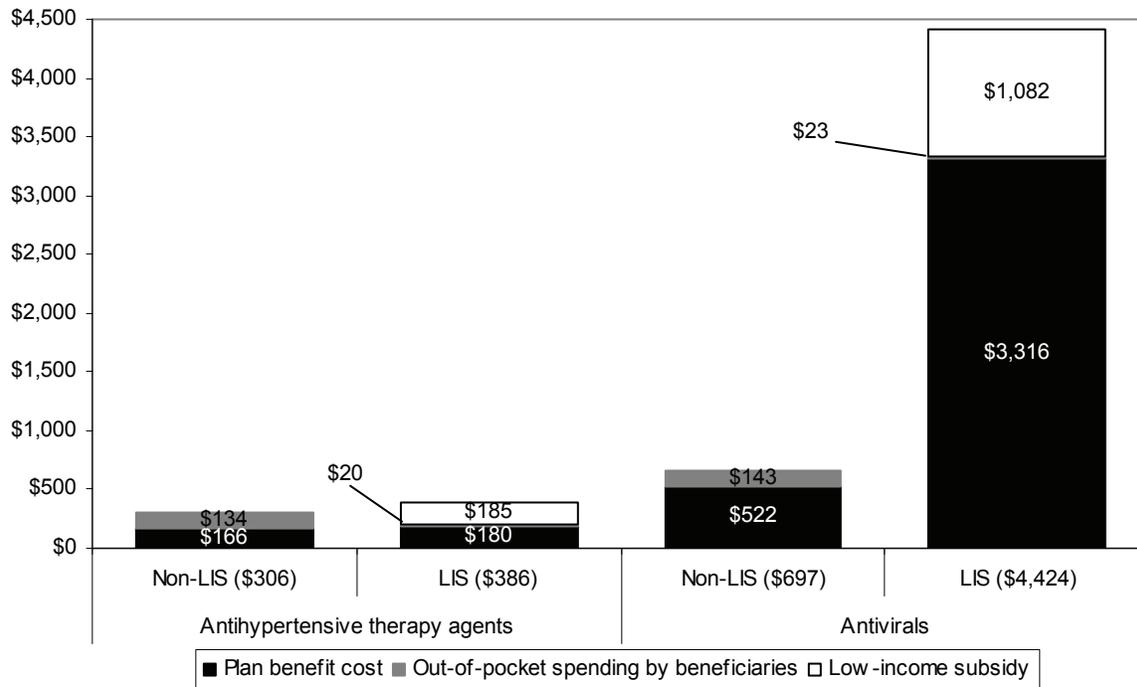
	Top 15 therapeutic classes by spending		Top 15 therapeutic classes by volume		
	Dollars		Prescriptions		
	Billions	Percent	Millions	Percent	
Antihyperlipidemics	\$6.0	9.7%	Antihypertensive therapy agents	118.3	10.3%
Antipsychotics	5.0	8.0	Antihyperlipidemics	99.6	8.7
Peptic ulcer therapy	4.0	6.5	Beta adrenergic blockers	72.2	6.3
Diabetic therapy	4.0	6.4	Diabetic therapy agents	70.8	6.2
Antihypertensive therapy agents	4.0	6.4	Diuretics	69.7	6.1
Asthma therapy agents	3.0	4.8	Antidepressants	61.0	5.3
Anticonvulsant	2.8	4.5	Analgesics (narcotic)	53.8	4.7
Antidepressants	2.7	4.3	Peptic ulcer therapy	50.2	4.4
Calcium & bone metabolism regulators	2.4	3.8	Calcium channel blockers	46.7	4.1
Analgesics (narcotic)	2.2	3.6	Thyroid therapy	39.8	3.5
Platelet aggregation inhibitors	2.1	3.4	Antibacterial agents	33.9	3.0
Cognitive disorder therapy (antidementia)	1.9	3.1	Asthma therapy agents	32.0	2.8
Calcium channel blockers	1.8	3.0	Anticonvulsant	28.5	2.5
Antivirals	1.7	2.8	Calcium & bone metabolism regulators	25.7	2.2
Beta adrenergic blockers	1.5	2.5	Analgesics (anti-inflammatory/antipyretic, non-narcotic)	22.8	2.0
Subtotal, top 15 classes	45.1	72.6	Subtotal, top 15 classes	825.1	72.0
Total, all classes	62.2	100.0	Total, all classes	1,145.8	100.0

Note: Volume is the number of prescriptions standardized to a 30-day supply. Therapeutic classification based on the First DataBank Enhanced Therapeutic Classification System 1.0.

Source: MedPAC analysis of Medicare Part D prescription drug event data from CMS.

- In 2007, gross spending on prescription drugs covered by Part D plans totaled \$62.2 billion. The top 15 therapeutic classes by spending accounted for about 73 percent of the total.
- More than 1.1 billion prescriptions were dispensed in 2007, with the top 15 therapeutic classes by volume accounting for 72 percent of the total.
- Eleven therapeutic classes are among the top 15 based on spending and volume. Cardiovascular agents (antihyperlipidemics, antihypertensive therapy agents, beta adrenergic blockers, calcium channel blockers, and diuretics) dominate both lists, accounting for nearly 30 percent of the spending and close to 50 percent of the prescriptions.

Chart 14. LIS enrollees experience higher average spending and lower OOP costs, but experiences varied by drug class, 2007



Note: LIS (low-income subsidy), OOP (out-of-pocket). Spending does not reflect retrospective rebates that plans may receive from pharmaceutical manufacturers. For calculating total annual spending, all Part D prescription drug event records for a given class and beneficiary are classified as LIS if that individual received Part D's LIS at some point during the year.

Source: MedPAC analysis of Medicare Part D prescription drug event data from CMS.

- In 2007, the average annual spending per enrollee among those who were on medications within a given therapeutic class varied widely across different classes, ranging from a few hundred dollars for beta blockers and antihypertensive therapy agents to more than \$1,000 for antipsychotics and antideementia drugs and more than \$4,000 for antiviral drugs for LIS enrollees.
- Annual spending for therapeutic classes such as antivirals, antipsychotics, and anticonvulsants is much higher for LIS enrollees compared with non-LIS enrollees. LIS enrollees tend to be sicker and may use more medicines or take a different mix of drugs in these therapeutic classes compared with non-LIS enrollees. On the other hand, annual spending for LIS and non-LIS enrollees is similar for therapeutic classes such as antihypertensive therapy agents, calcium channel blockers, and antihyperlipidemics.
- Non-LIS enrollees face much higher OOP expenses compared with LIS enrollees. For example, average annual OOP spending for antihypertensive therapy agents is \$134 for non-LIS enrollees compared with \$20 for LIS enrollees. Average OOP expenses for non-LIS enrollees also vary widely across different therapeutic classes, ranging from about \$40 for analgesics (narcotics) to more than \$500 for antideementia drugs.

Chart 15. Generic dispensing rate for the top 15 therapeutic classes, by plan type, 2007

By order of aggregate spending	PDP share of all prescriptions	Generic dispensing rate		
		All	PDPs	MA-PDs
Antihyperlipidemics	70%	45%	40%	57%
Antipsychotics	88	19	19	20
Peptic ulcer therapy	75	51	47	62
Diabetic therapy	71	59	56	66
Antihypertensive therapy agents	70	66	62	73
Asthma therapy agents	76	21	22	21
Anticonvulsant	81	52	49	63
Antidepressants	78	73	72	80
Calcium & bone metabolism regulators	72	0	0	0
Analgesics (narcotic)	79	94	94	95
Platelet aggregation inhibitors	74	17	15	21
Cognitive disorder therapy (antidementia)	79	0	0	0
Calcium channel blockers	70	66	66	66
Antivirals	82	22	20	35
Beta adrenergic blockers	70	79	76	85
All therapeutic classes	74	61	60	66

Note: PDP (prescription drug plan), MA-PD (Medicare Advantage-Prescription Drug [plan]). Shares are calculated as a percent of all prescriptions standardized to a 30-day supply. Therapeutic classification is based on the First DataBank Enhanced Therapeutic Classification System 1.0. Generic dispensing rate is defined as the proportion of generic prescriptions dispensed within a therapeutic class. Part D prescription drug event records are classified as PDP or MA-PD records based on the contract identification on each record.

Source: MedPAC analysis of Medicare Part D prescription drug event data from CMS.

- In 2007, Part D enrollees in stand-alone PDPs accounted for 74 percent of prescriptions dispensed under Part D. PDP enrollees accounted for a disproportionately high share of prescriptions for classes such as antipsychotics, antivirals, and anticonvulsants. Most of the prescriptions in these classes were taken by LIS beneficiaries, of whom more than 80 percent are enrolled in PDPs.
- Overall, analgesics have the highest generic dispensing rate (GDR) (94 percent), followed by beta blockers (79 percent) and antidepressants (73 percent), compared to 57 percent across all therapeutic classes.
- The GDR for PDP enrollees averages 55 percent across all therapeutic classes, compared with 62 percent for MA-PD enrollees. Across the 15 therapeutic classes, GDRs for PDP enrollees were generally lower than for MA-PD enrollees with the exception of asthma therapy agents, calcium channel blockers, and classes with no generic alternative (calcium and bone metabolism regulators and cognitive disorder therapy).
- In most therapeutic classes, GDRs for PDP and MA-PD enrollees are either both above or both below the respective averages across all therapeutic classes. However, for peptic ulcer therapy and anticonvulsants, GDRs for PDP enrollees (47 percent and 49 percent) are below the average (55 percent) while GDRs for MA-PD enrollees (62 percent and 63 percent) are at or above the average (62 percent).
- There were large differences in GDRs for PDPs and MA-PDs. The largest difference was for antihyperlipidemics, with a 17 percentage point difference. Some of the difference in the GDRs reflects the fact that most beneficiaries receiving the LIS are in PDPs. On average, LIS enrollees are less likely to take a generic medication in a given therapeutic class (see Chart 16).

Chart 16. Generic dispensing rate for the top 15 therapeutic classes, by low-income subsidy status, 2007

By order of aggregate spending	LIS share of prescriptions	Generic dispensing rate		
		All	LIS	Non-LIS
Antihyperlipidemics	36%	45%	42%	47%
Antipsychotics	84	19	19	18
Peptic ulcer therapy	55	51	48	54
Diabetic therapy	49	59	53	65
Antihypertensive therapy agents	38	66	65	66
Asthma therapy agents	57	21	24	18
Anticonvulsant	67	52	46	64
Antidepressants	56	73	71	76
Calcium & bone metabolism regulators	35	0	0	0
Analgesics (narcotic)	60	94	94	95
Platelet aggregation inhibitors	44	17	15	18
Cognitive disorder therapy (antidementia)	52	0	0	0
Calcium channel blockers	39	66	66	66
Antivirals	71	22	15	39
Beta adrenergic blockers	37	79	77	80
All therapeutic classes	46	61	60	62

Note: LIS (low-income subsidy). Shares are calculated as a percent of all prescriptions standardized to a 30-day supply. Therapeutic classification is based on the First DataBank Enhanced Therapeutic Classification system 1.0. Generic dispensing rate is defined as the proportion of generic prescriptions dispensed within a therapeutic class. Part D prescription drug event (PDE) records are classified as LIS or non-LIS records based on monthly LIS eligibility information in the Part D's denominator file. Estimates are sensitive to the method used to classify PDE records as LIS or non-LIS.

Source: MedPAC analysis of Medicare Part D prescription drug event data and Part D denominator file from CMS.

- In 2007, Part D enrollees receiving the LIS accounted for 40 percent of prescriptions dispensed under Part D. In 10 of 15 therapeutic classes ranked by spending, the share of prescriptions dispensed to LIS beneficiaries was greater than 40 percent, and in 4 classes the share was greater than 60 percent.
- The generic dispensing rate (GDR) for non-LIS beneficiaries averages 60 percent across all therapeutic classes, compared with 51 percent for LIS beneficiaries. Across the 15 top therapeutic classes, GDRs for non-LIS beneficiaries are higher than those of LIS beneficiaries in 8 classes, roughly the same in 3 classes (antihypertensive therapy agents, analgesics, and calcium channel blockers), and lower in 2 classes (antipsychotics and asthma therapy agents). In two classes (calcium and bone metabolism regulators and cognitive disorder therapy) with no generic alternatives, the GDR for both groups is zero.
- There are large differences in GDRs across classes between LIS and non-LIS beneficiaries. The largest difference is for antivirals. Some of the difference in the GDRs (24 percentage points) likely reflects the differences in the mix of drugs taken between the two groups.

Chart 17. Characteristics of statin users and utilization patterns, 2007

	All Part D		Statin users			
		Part D	Plan type		Subsidy status	
			PDP	MA–PD	LIS	Non-LIS
Gross spending (in billions)	\$62.2	\$5.3	\$3.9	\$1.4	\$2.0	\$3.3
Medicare beneficiaries (in millions)	26.1	10.3	7.1	3.2	3.8	6.6
Percent of all Part D within respective groups ¹	100%	40%	39%	42%	36%	42%
Demographic characteristics						
Percent female	60%	60%	61%	58%	66%	57%
Percent White	74	75	77	71	58	85
Percent under age 65	23	18	20	13	32	10
Average risk score	1.071	1.181	1.209	1.120	1.312	1.106
Percent relative to all Part D within respective groups ²		110%	110%	111%	113%	109%
Per user per month ³						
Number of statin prescriptions ⁴		0.75	0.76	0.74	0.75	0.76
Spending on statins		\$45	\$48	\$38	\$48	\$43
Generic dispensing rate ^{3,4}		46%	40%	58%	42%	48%

Note: PDP (prescription drug plan), MA–PD (Medicare Advantage–Prescription Drug [plan]), LIS (low-income subsidy). If a beneficiary was enrolled in both a PDP and an MA–PD plan during the year, that individual was classified into the type of plan with a greater number of months of enrollment. Prescriptions for statins are identified using First Databank Enhanced Therapeutic Classification System 1.0, and includes all 3-hydroxy-3-methyl glutaryl–coenzyme A (HMG–CoA) reductase inhibitors, and HMG–CoA combination medications. Components may not sum to total due to rounding.

¹For example, 39 percent of PDP enrollees filled at least one prescription for statin during 2007.

²For example, the average risk score among statin users enrolled in PDPs (1.209) is 10 percent higher than the average for all PDP enrollees.

³Part D prescription drug event (PDE) records are classified into plan types based on the contract identification on each record. For purposes of classifying the PDE records by LIS status, monthly LIS eligibility information in the Part D's denominator file is used. Estimates are sensitive to the method used to classify PDE records to each plan type and LIS status.

⁴Number of prescriptions is standardized to a 30-day supply.

Source: MedPAC analysis of Medicare Part D PDE data, denominator file, and Medicare enrollment files from CMS.

(Chart continued next page)

Chart 17. Characteristics of statin users and utilization patterns, 2007 (continued)

- In 2007, gross spending on statin drugs, a class of drugs used to treat high cholesterol, totaled \$5.3 billion, accounting for nearly 90 percent of the spending on antihyperlipidemics covered under Part D (\$6 billion).
- Of the 26 million Medicare beneficiaries enrolled in Part D, 10.3 million (40 percent) fill at least one prescription for a statin. Roughly 70 percent of statin users (7.1 million) are enrolled in stand-alone PDPs, and about 36 percent (3.8 million) receive Part D's LIS.
- Part D enrollees in MA-PDs are slightly more likely to fill prescriptions for statins (42 percent) compared with those in PDPs (39 percent); LIS enrollees are less likely to fill prescriptions for statins (36 percent) compared with non-LIS enrollees (42 percent).
- Overall, demographic characteristics of statin users are generally similar to those for all Part D enrollees but vary between PDP and MA-PD enrollees as well as between LIS and non-LIS enrollees, reflecting the underlying demographic characteristics of enrollees in each group (see Chart 1).
- The average risk score among statin users is 10 percent higher than the average for Part D enrollees overall. Average risk scores among statin users in PDPs are higher (1.209) compared with users in MA-PDs (1.120), but, in both cases, the average risk scores among users are roughly 10 percent higher than the average for all enrollees in each plan type. LIS enrollees who used statins had average risk scores 13 percent higher than the average for all LIS enrollees.
- The number of prescriptions filled averages 0.75 prescription per user per month overall, with little variation by plan type or subsidy status.
- Spending on statins per user per month averages \$45. The average spending on statins is higher among users enrolled in PDPs (\$48) compared with those in MA-PDs (\$38) and higher among users receiving the LIS (\$48) compared with non-LIS users (\$43).
- The generic dispensing rate (GDR) for statins among users averages 46 percent overall, with a higher GDR for users in MA-PDs (58 percent) compared with users in PDPs (40 percent) and a lower GDR for users receiving LIS (42 percent) compared with non-LIS users (48 percent). GDR can be influenced by many factors, including plan formularies, plans' use of utilization management tools, patterns of physician prescribing, and beneficiaries' medication needs and preferences. Some of the difference in GDRs between users enrolled in PDPs and MA-PDs is likely due to proportionately higher enrollment of members receiving the LIS in PDPs.

Chart 18. Characteristics of proton pump inhibitor users and utilization patterns, 2007

	All Part D		PPI users			
		Part D	Plan type		Subsidy status	
			PDP	MA-PD	LIS	Non-LIS
Gross spending (in billions)	\$62.2	\$3.8	\$3.1	\$0.7	\$2.2	\$1.6
Medicare beneficiaries (in millions)	26.1	5.7	4.3	1.4	3.0	2.8
Percent of all Part D within respective groups ¹	100%	22%	24%	18%	28%	18%
Demographic characteristics						
Percent female	60%	66%	67%	64%	69%	64%
Percent White	74	73	74	68	62	85
Percent under 65	23	25	27	18	36	12
Average risk score	1.071	1.283	1.307	1.207	1.371	1.188
Percent relative to all Part D within respective groups ²		120%	119%	120%	118%	118%
Per user per month ³						
Number of PPI prescriptions ⁴		0.59	0.61	0.55	0.63	0.56
Spending on PPIs		\$58	\$63	\$45	\$66	\$51
Generic dispensing rate ^{3,4}		37%	34%	48%	33%	42%

Note: PPI (proton pump inhibitor), PDP (prescription drug plan), MA-PD (Medicare Advantage-Prescription Drug [plan]), LIS (low-income subsidy). If a beneficiary was enrolled in both a PDP and an MA-PD plan during the year, that individual was classified into the type of plan with a greater number of months of enrollment. Prescriptions for PPIs are identified using the First Databank Enhanced Therapeutic Classification System 1.0. Components may not sum to total due to rounding.

¹For example, 24 percent of PDP enrollees filled at least one prescription for PPIs during 2007.

²For example, average risk score among PPI users enrolled in PDPs (1.307) is 19 percent higher than the average for all PDP enrollees.

³Part D prescription drug event (PDE) records are classified into plan types based on the contract identification on each record. For purposes of classifying the PDE records by LIS status, monthly LIS eligibility information in the Part D's denominator file is used. Estimates are sensitive to the method used to classify PDE records to each plan type and LIS status. Generic dispensing rate is defined as the proportion of generic prescriptions dispensed within a therapeutic class.

⁴Number of prescriptions standardized to a 30-day supply.

Source: MedPAC analysis of Medicare Part D PDE data, denominator file, and Medicare enrollment files from CMS.

(Chart continued next page)

Chart 18. Characteristics of proton pump inhibitor users and utilization patterns, 2007 (continued)

- In 2007, gross spending on PPIs, a class of drugs used to treat conditions such as heartburn and gastric ulcers, totaled \$3.8 billion, accounting for about 95 percent of the spending on peptic ulcer therapy medications covered under Part D (\$4 billion).
- Of the 26 million Medicare beneficiaries enrolled in Part D, 5.7 million (22 percent) filled at least one prescription for a PPI. About three-quarters of PPI users (4.3 million) are enrolled in stand-alone PDPs, and more than half of the users receive Part D's LIS.
- PDP enrollees are more likely to fill prescriptions for PPIs (24 percent) than enrollees in MA-PDs (18 percent), and LIS enrollees are more likely to fill prescriptions for PPIs (28 percent) than non-LIS enrollees (18 percent).
- Compared with all Part D enrollees, PPI users are more likely to be female (66 percent compared with 60 percent) and slightly more likely to be disabled beneficiaries under age 65 (25 percent compared with 23 percent). The demographic characteristics of the PPI users vary between PDP and MA-PD enrollees as well as between LIS and non-LIS enrollees but are generally consistent with the underlying demographic characteristics of enrollees in each group (see Chart 1).
- The average risk scores among PPI users are roughly 20 percent higher compared with the average for Part D enrollees overall and across plan type and subsidy status.
- The number of prescriptions filled averages 0.59 prescription per user per month. The average number of prescriptions is higher among users enrolled in PDPs (0.61 prescriptions) compared with those in MA-PDs (0.55 prescription), and higher among users receiving the LIS (0.63 prescription) compared with non-LIS users (0.56 prescription).
- Spending on PPIs per user per month averages \$58. The average spending on PPIs is higher among users enrolled in PDPs (\$63) compared with those in MA-PDs (\$45) and higher among users receiving the LIS (\$66) compared with non-LIS users (\$51).
- The generic dispensing rate (GDR) for PPIs among users averages 37 percent overall, with a higher GDR for users in MA-PDs (48 percent) than users in PDPs (34 percent) and a lower GDR for users receiving the LIS (33 percent) than non-LIS users (42 percent). GDRs can be influenced by many factors, including plan formularies, plans' use of utilization management tools, patterns of physician prescribing, and beneficiaries' medication needs and preferences. Some of the difference in GDRs between users enrolled in PDPs and MA-PDs is likely due to proportionately higher enrollment of members with LIS in PDPs.

Chart 19. Characteristics of selective serotonin reuptake inhibitor users and utilization patterns, 2007

	All Part D		SSRI users			
		Part D	Plan type		Subsidy status	
			PDP	MA-PD	LIS	Non-LIS
Gross spending (in billions)	\$62.2	\$1.2	\$1.0	\$0.2	\$0.7	\$0.5
Medicare beneficiaries (in millions)	26.1	4.2	3.2	1.0	2.3	2.0
Percent of all Part D within respective groups ¹	100%	16%	18%	13%	22%	13%
Demographic characteristics						
Percent female	60%	71%	71%	71%	71%	72%
Percent White	74	81	82	77	73	89
Percent under age 65	23	33	35	25	47	17
Average risk score	1.071	1.288	1.306	1.230	1.367	1.198
Percent relative to all Part D within respective groups ²		120%	119%	122%	117%	119%
Per user per month ³						
Number of PPI prescriptions ⁴		0.67	0.69	0.65	0.70	0.65
Spending on PPIs		\$25	\$26	\$20	\$28	\$21
Generic dispensing rate ^{3,4}		76%	74%	83%	74%	79%

Note: SSRI (selective serotonin reuptake inhibitor), PDP (prescription drug plan), MA-PD (Medicare Advantage-Prescription Drug plan), LIS (low-income subsidy). If a beneficiary was enrolled in both a PDP and an MA-PD plan during the year, that individual is classified into the type of plan with a greater number of months of enrollment. Prescriptions for SSRIs are identified using the First Databank Enhanced Therapeutic Classification System 1.0. Components may not sum to total due to rounding.

¹For example, 18 percent of PDP enrollees filled at least one prescription for SSRIs during 2007.

²For example, the average risk score among SSRI users enrolled in PDPs (1.306) is 19 percent higher than the average for all PDP enrollees.

³Part D prescription drug event (PDE) records are classified into plan types based on the contract identification on each record. For purposes of classifying the PDE records by LIS status, monthly LIS eligibility information in the Part D's denominator file is used. Estimates are sensitive to the method used to classify PDE records to each plan type and LIS status.

⁴Number of prescriptions standardized to a 30-day supply.

Source: MedPAC analysis of Medicare Part D PDE data, denominator file, and Medicare enrollment files from CMS.

(Chart continued next page)

Chart 19. Characteristics of selective serotonin reuptake inhibitor users and utilization patterns, 2007 (continued)

- In 2007, gross spending on SSRIs, a class of antidepressant medications, totaled \$1.2 billion, accounting for about 44 percent of the spending on antidepressants covered under Part D (\$2.7 billion). Antidepressants are one of six protected therapeutic classes in which plans must cover all or a substantial amount of drugs.
- Of the 26 million Medicare beneficiaries enrolled in Part D, 4.2 million (16 percent) fill at least one prescription for an SSRI. More than three-quarters of SSRI users (3.2 million) are enrolled in stand-alone PDPs, and more than half receive Part D's LIS.
- PDP enrollees are more likely to fill prescriptions for SSRIs (18 percent) than enrollees in MA-PDs (13 percent), and LIS enrollees are more likely to fill prescriptions for SSRIs (22 percent) than non-LIS enrollees (13 percent).
- Compared with all Part D enrollees, SSRI users are more likely to be female (71 percent compared with 60 percent), White (81 percent compared with 74 percent), and disabled beneficiaries under age 65 (33 percent compared with 23 percent). Demographic characteristics vary between PDP and MA-PD enrollees, as well as between LIS and non-LIS enrollees, generally reflecting the underlying demographic characteristics of enrollees in each group (see Chart 1).
- The average risk scores among SSRI users is roughly 20 percent higher than the average for Part D enrollees.
- The number of prescriptions filled averages 0.67 prescription per user per month. The average number of prescriptions is higher among SSRI users enrolled in PDPs (0.69 prescription) compared with those in MA-PDs (0.65 prescription) and higher among users receiving LIS (0.70) compared with non-LIS users (0.65).
- Spending on SSRIs per user per month averages \$25. The average spending on SSRIs is higher among users enrolled in PDPs (\$26) compared to those in MA-PDs (\$20), and higher among users receiving LIS (\$28) compared to non-LIS users (\$21).
- Generic dispensing rate (GDR) for SSRIs among users averages 76 percent overall, with a higher GDR for users in MA-PDs (83 percent) compared with users in PDPs (74 percent) and a lower GDR for users receiving LIS (74 percent) compared with non-LIS users (79 percent). GDRs can be influenced by many factors, including plan formularies, plans' use of utilization management tools, patterns of physician prescribing, and beneficiaries' medication needs and preferences. Some of the difference in GDRs across users enrolled in PDPs and MA-PDs is likely due to proportionately higher enrollment of members with LIS in PDPs.

Chart 20. Characteristics of antiretroviral drug users and utilization patterns, 2007

	All Part D	Antiretroviral drug users				
		Part D	Plan type		Subsidy status	
			PDP	MA-PD	LIS	Non-LIS
Gross spending (in billions)	\$62.2	\$1.4	\$1.2	\$0.2	\$1.2	\$0.2
Medicare beneficiaries (in millions)	26.1	0.10	0.08	0.01	0.08	0.01
Percent of all Part D within respective groups ¹	100%	0.4%	0.5%	0.2%	0.8%	0.1%
Demographic characteristics						
Percent female	60%	22%	23%	19%	24%	12%
Percent White	74	42	42	44	39	62
Percent under age 65	23	91	92	81	93	77
Average risk score	1.071	2.690	2.689	2.693	2.713	2.545
Percent relative to all Part D within respective groups ²		251%	245%	267%	233%	252%
Per user per month ³						
Number of PPI prescriptions ⁴		1.96	1.97	1.95	1.98	1.89
Spending on PPIs		\$1,249	\$1,254	\$1,250	\$1,262	\$1,200
Generic dispensing rate ^{3,4}		4%	4%	3%	4%	3%

Note: PDP (prescription drug plan), MA-PD (Medicare Advantage-Prescription Drug [plan]), LIS (low-income subsidy). If a beneficiary was enrolled in both a PDP and an MA-PD plan during the year, that individual was classified into the type of plan with a greater number of months of enrollment. Prescriptions for antiretroviral drugs are identified using the First Databank Enhanced Therapeutic Classification System 1.0. Components may not sum to total due to rounding.

¹For example, 0.5 percent of PDP enrollees filled at least one prescription for antiretrovirals during 2007.

²For example, the average risk score among antiretroviral drug users enrolled in PDPs (2.689) is 145 percent higher than the average for all PDP enrollees.

³Part D prescription drug event (PDE) records are classified into plan types based on the contract identification on each record. For purposes of classifying the PDE records by LIS status, monthly LIS eligibility information in Part D's denominator file is used. Estimates are sensitive to the method used to classify PDE records to each plan type and LIS status.

⁴Number of prescriptions standardized to a 30-day supply.

Source: MedPAC analysis of Medicare Part D PDE data, denominator file, and Medicare enrollment files from CMS.

(Chart continued next page)

Chart 20. Characteristics of antiretroviral drug users and utilization patterns, 2007 (continued)

- In 2007, gross spending on antiretroviral drugs, a class of drugs used to treat infections caused by retroviruses (mostly human immunodeficiency virus, or HIV), totaled \$1.4 billion, accounting for about 80 percent of the spending on antivirals covered under Part D (\$1.7 billion). Antiretrovirals are one of six protected therapeutic classes in which plans must cover all or a substantial amount of drugs.
- Of the 26 million Medicare beneficiaries enrolled in Part D, about 100,000 (0.4 percent) fill at least one prescription for an antiretroviral. The majority of the antiretroviral drug users (about 80,000) are enrolled in stand-alone prescription drug plans (PDPs) and receive Part D's low-income subsidy (LIS).
- Compared with all Part D enrollees, antiretroviral drug users are much less likely to be female (22 percent compared to 60 percent), less likely to be White (42 percent compared to 74 percent), and much more likely to be disabled beneficiaries under age 65 (91 percent compared to 23 percent).
- Demographic characteristics of antiretroviral users vary between PDP and MA-PD enrollees, as well as between LIS and non-LIS enrollees, and in some cases differed significantly from the underlying demographic characteristics of beneficiaries in each group. For example, a disproportionate share of users in MA-PD plans are under age 65 (disabled) (81 percent) compared with the share among all MA-PD enrollees (16 percent) (not shown). Similarly, a disproportionate share of non-LIS users are under age 65 (disabled) (77 percent) compared with the share among all non-LIS enrollees (12 percent) (not shown).
- The average risk scores among antiretroviral drug users are more than double the average for Part D enrollees overall, and across plan type and subsidy status.
- The number of antiretroviral prescriptions filled averages 1.96 per user per month. It is generally the same across plan type and subsidy status.
- Spending on antiretroviral drugs per user per month averages \$1,249 across all users, with little variation by plan type or subsidy status.
- The generic dispensing rate (GDR) for antiretrovirals among users averages 4 percent overall, and is about the same across all users. The low GDR reflects the lack of generic alternatives for most drugs in this therapeutic class.

Chart 21. Pharmacies participating in Part D, 2007

	Pharmacies	Prescriptions	Gross spending
Totals	63,665	1,145.8 million	\$62.2 billion
Pharmacy class			
Chain pharmacy	61.5%	61.4%	59.2%
Independent pharmacy	33.0	33.0	35.5
Franchise pharmacy	1.4	1.3	1.3
Government pharmacy	0.9	0.4	0.4
Alternate dispensing site ¹	3.2	2.9	2.7
Other ²	<0.1	0.9	0.8
Pharmacy type			
Retail ³	91.7%	80.3%	78.9%
Long-term care	2.5	9.9	11.4
Mail order	0.2	6.2	5.7
Physician's office	0.5	<0.1	<0.1
Institution	1.4	0.6	0.7
MCO pharmacy	0.2	0.7	0.4
Clinic	1.4	1.1	1.0
Specialty pharmacy	0.3	0.1	0.4
Other ⁴	1.7	1.2	1.4

Note: MCO (managed care organization). A small number of pharmacies could not be classified due to missing data. Prescription size is standardized to a 30-day supply. Pharmacy class and type are based on 2007 National Council for Prescription Drug Programs classification.

¹Alternate dispensing site includes physician offices, emergency departments, urgent care centers, and rural health facilities.

²Other class includes institutions and pharmacies that could not be classified due to missing data.

³Retail includes all community pharmacies, grocery pharmacies, and department store pharmacies.

⁴Other type includes the Indian Health Service, VA hospitals, nuclear pharmacies, military/U.S. Coast Guard pharmacies, compounding pharmacies, facilities specializing in intravenous infusion, and pharmacies that could not be classified due to missing data.

Source: MedPAC analysis of Medicare Part D prescription drug event data from CMS.

- In 2007, over 63,000 pharmacies dispensed prescription drugs to Medicare beneficiaries enrolled in Part D. Most pharmacies (61.5 percent) are chain pharmacies, followed by independent pharmacies (33 percent).
- Chain pharmacies account for about 60 percent of prescriptions and spending, while independent pharmacies account for 33 percent of prescriptions and about 36 percent of spending.
- Retail pharmacies account for over 90 percent of the pharmacies and about 80 percent of prescriptions and spending. Long-term care pharmacies account for 2.5 percent of the pharmacies, but close to 10 percent of prescriptions and over 11 percent of spending. Mail-order pharmacies account for less than 1 percent of the pharmacies serving Part D beneficiaries, but account for about 6 percent of prescriptions and spending.

Chart 22. Prescriptions dispensed, by pharmacy characteristics and urbanicity, 2007

	CBSA designation		
	Metropolitan	Micropolitan	Rural
Number of pharmacies	51,355	7,128	5,176
As percent of total	81%	11%	8%
Prescriptions dispensed			
By pharmacy location	80%	12%	8%
By beneficiary location	78	13	10
Pharmacy class and pharmacy location			
Chain pharmacy	65.3%	54.2%	40.0%
Independent pharmacy	29.7	41.5	56.5
Franchise pharmacy	1.0	2.8	1.9
Government pharmacy	0.3	0.6	0.7
Alternate dispensing site ¹	3.4	0.9	1.0
Other ²	0.2	0.1	0
Pharmacy type and <u>pharmacy</u> location			
Retail ³	77.9%	91.5%	95.3%
Long-term care	11.2	6.5	2.7
Mail order	7.7	<0.1	<0.1
Other ⁴	3.1	2.0	1.9
Pharmacy type and <u>beneficiary</u> location			
Retail ³	79.1%	83.2%	86.3%
Long-term care	10.1	9.9	7.7
Mail order	6.8	4.5	3.5
Other ⁴	4.0	2.3	2.5

Note: CBSA (core-based statistical area). A metropolitan area contains a core urban area of 50,000 or more population, and a micropolitan area contains an urban core of at least 10,000 (but less than 50,000) population. Fewer than 10 pharmacies and less than 1 percent of prescription drug event records could not be classified because the CBSA designation could not be identified. Pharmacy class and type are based on the 2007 National Council for Prescription Drug Programs classification. Number of prescriptions is standardized to a 30-day supply. Totals may not sum to 100 percent due to rounding.

¹Alternative dispensing site includes physician offices, emergency departments, urgent care centers, and rural health facilities.

²Other class includes institutions and pharmacies that could not be classified due to missing data.

³Retail includes all community pharmacies, grocery pharmacies, and department store pharmacies.

⁴Other type includes physician's offices, institutions, managed care organization pharmacies, clinics, specialty pharmacies, the Indian Health Service, VA hospitals, nuclear pharmacies, military/U.S. Coast Guard pharmacies, compounding pharmacies, facilities specializing in intravenous infusion, and pharmacies that could not be classified due to missing data.

Source: MedPAC analysis of Medicare Part D prescription drug event data from CMS.

(Chart continued next page)

Chart 22. Prescriptions dispensed, by pharmacy characteristics and urbanicity, 2007 (continued)

- In 2007, of the pharmacies that participated in Part D, 81 percent (51,355) were in metropolitan areas, 11 percent (7,128) were in micropolitan areas, and the remaining 8 percent (5,176) were in rural areas of the states. This distribution is similar to that of Part D enrollees (see Chart 3). Distributions of prescriptions dispensed followed similar patterns regardless of whether they were classified based on pharmacy locations or beneficiary locations.
- In metropolitan areas, chain pharmacies account for slightly more than 65 percent of all prescriptions dispensed under Part D, while independent pharmacies account for about 30 percent of the prescriptions dispensed. In micropolitan areas, independent pharmacies account for a larger share of prescriptions dispensed (41.5 percent), but chain pharmacies still account for majority of the prescriptions dispensed (54.2 percent). In rural areas of the states, most prescriptions dispensed (56.5 percent) are accounted for by independent pharmacies.
- Retail pharmacies account for the largest share of prescriptions dispensed under Part D in all areas, but there are some differences. For example, in metropolitan areas, retail pharmacies account for about 80 percent of the prescriptions and beneficiaries also obtain about 80 percent of their prescriptions at retail pharmacies. On the other hand, in micropolitan and rural areas more than 90 percent of prescriptions are accounted for by retail pharmacies, but beneficiaries residing in those areas fill fewer than 90 percent (83.2 percent and 86.3 percent) of their medications at retail pharmacies.
- Long-term care pharmacies located in metropolitan areas account for a larger share of prescriptions (11.2 percent) compared with micropolitan areas (6.5 percent) and rural areas (2.7 percent). The prescriptions filled by beneficiaries residing in different areas do not vary as much; 10.1 percent are filled by beneficiaries in metropolitan areas compared with 9.9 percent and 7.7 percent filled by those in micropolitan and rural areas, respectively.
- Most mail-order pharmacies are located in metropolitan areas, and beneficiaries residing in metropolitan areas fill more prescriptions through mail-order pharmacies (6.8 percent) compared with those in micropolitan and rural areas (4.5 percent and 3.5 percent).



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