

# Cost Minimization of Medicare Part D Prescription Drug Plan Expenditures

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**M**edicare Part D (Part D), the prescription drug program for Medicare beneficiaries, went into effect on January 1, 2006.<sup>1</sup> In its third year of operation, 25.4 million beneficiaries were enrolled in a Part D plan, with 68% of enrollees in a stand-alone prescription drug plan (PDP) and the remainder in a plan that combines prescription drug coverage with hospital and medical coverage (ie, Medicare Advantage Prescription Drug plan).<sup>2</sup> The program has enjoyed some important successes. Since the introduction of Part D, the proportion of Medicare-eligible beneficiaries without drug coverage has decreased by 60%.<sup>3</sup> Research suggests that Part D has improved some beneficiaries' access to and use of prescription medicines, while decreasing out-of-pocket expenditures.<sup>4</sup>

Nonetheless, some important challenges remain. Despite having lowered out-of-pocket costs for some beneficiaries, Part D plans may still burden many with high out-of-pocket costs, creating a significant barrier to accessing prescription drugs. Compared with those having employer-sponsored or Department of Veterans Affairs PDPs, more seniors with Part D have high out-of-pocket prescription drug expenditures.<sup>5</sup> More than 25% of Medicare-eligible individuals reported spending at least \$100 per month on their prescription medications; these same investigators found that 8% of such individuals reported spending at least \$300 per month on their prescription medications.<sup>5</sup> A 2007 study<sup>6</sup> of national patient-level retail pharmacy claims data found that 14% of Part D enrollees (excluding those receiving federal subsidies)—3.4 million beneficiaries—reached the coverage gap in 2007, with monthly out-of-pocket spending almost doubling from \$104 before the gap to \$196 during the gap. Among those who reached the gap, 15% stopped taking their medications, and 5% switched to an alternative drug in the same drug class. These findings are especially important because many Medicare beneficiaries are senior citizens with fixed incomes or limited resources, and high out-of-pocket expenses may result in increased rates of noncompliance (eg, forgoing filling a prescription or delaying to fill a prescription).<sup>5</sup> Finally, other evidence suggests that access to the benefit remains problematic for some. Of 12.5 million most vulnerable Medicare

beneficiaries who may qualify for extra help ("low-income subsidy" [LIS]) to pay for their prescription drug costs, 2.6 million (20.8%) have yet to apply for the subsidy. Many of these indi-

**Objective:** To minimize out-of-pocket prescription drug plan (PDP) expenditures by Medicare beneficiaries.

**Study Design:** Cost-minimization analysis.

**Methods:** Trained student pharmacists from 6 California pharmacy schools provided expert guidance on Medicare Part D PDPs to beneficiaries through interventions at statewide outreach events. Demographic and insurance information for 2008 was collected via survey. Cost information for the beneficiary's current PDP for 2008 and for the least expensive PDP for 2008 was obtained using the Medicare Plan Finder tool (<http://www.medicare.gov>).

**Results:** Data were collected from 250 beneficiaries at 22 outreach events. For the cost-minimization analysis, data were excluded from 72 beneficiaries who were not enrolled in a stand-alone PDP before the intervention and from another 23 beneficiaries for whom information regarding their current PDP or prescription drug profile was incomplete. Of the remaining 155 study participants, 39.4% were male, the mean (SD) age was 74.6 (8.7) years, and they were taking a mean (SD) of 5.3 (3.5) prescription drugs each month. In addition, 68 beneficiaries (43.9%) had limited or no English proficiency, and 85 beneficiaries (54.8%) were enrolled in both Medicare and Medicaid. In total, 89.7% of beneficiaries could have realized cost savings by switching to a different PDP. The median annual potential cost savings was \$98 per beneficiary but this varied as a function of subsidy level.

**Conclusion:** Targeted community outreach services to Medicare Part D beneficiaries can help optimize patient selection of a PDP, thereby resulting in lower out-of-pocket expenditures.

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### Take-Away Points

Targeted community outreach services to Medicare beneficiaries can help optimize selection of a prescription drug plan, thereby resulting in lower out-of-pocket expenditures.

- Trained student pharmacists who are proficient in using the Web-based Medicare Plan Finder tool can systematically evaluate Medicare Part D plan choices available to beneficiaries.
- Beneficiaries should reevaluate their Part D plans annually, as 9 of 10 could have saved money by doing so.
- Targeted community outreach could not only lower beneficiaries' out-of-pocket prescription drug plan costs, but also help identify those who may qualify for additional governmental assistance (receipt of the low-income subsidy).

medicare.gov) located on the Medicare Web site, a challenge for 54% of beneficiaries who lack Internet access.<sup>8</sup> Beneficiaries who rely on the CMS hotline (1-800-MEDICARE [1-800-633-4227]) may find obtaining information difficult if they have low literacy skills or are not fluent in English. A recent study<sup>9</sup> of 112 seniors, all English-speaking with

Internet experience, found that 72% were unable to select a drug plan or encountered difficulties navigating the site to find drug plan information. These findings are likely to be even more pronounced among those with limited or no English proficiency, as well as those having little familiarity with the Internet.

Individuals may be unaware of the existence of or may fail to fully understand the Part D benefit and the extra help available to them.<sup>2,5,7</sup> These challenges notwithstanding, perhaps the greatest barrier to accessing the Part D benefit is the enrollment process. Part D allows the beneficiary to choose and enroll in a privately sponsored Medicare-approved PDP. However, the number of PDP plan offerings can be overwhelming for a beneficiary and differs among 34 Medicare PDP regions set by the Centers for Medicare & Medicaid Services (CMS). The number of PDPs per region in 2008 ranged from a low of 47 in Alaska to a high of 63 in the Pennsylvania and West Virginia region.

Given their accessibility, knowledge of prescription drugs, and understanding of Part D, pharmacists are in an ideal position to serve as Part D patient advocates. In addition, the American Association of Colleges of Pharmacy<sup>10</sup> states that pharmacy educators should teach their students to serve society as caring ethical professionals and as enlightened citizens. Finally, the most recent Accreditation Council for Pharmacy Education<sup>11</sup> accreditation standards reflect the increasing value of training student pharmacists to provide patient-centered care during their professional graduate education. Given these factors, Partners in D, a statewide research program among 7 schools of pharmacy in California, was developed by the faculty at the University of California, San Francisco School of Pharmacy to train student pharmacists to assist underserved Medicare beneficiaries in various ways, including distinguishing which PDP may result in the lowest out-of-pocket cost, explaining plan formulary changes, describing a plan's cost-sharing structure, and identifying duplicative or unnecessary drug therapy.

In addition, because each plan can differ with regard to premium, deductible, cost-sharing provisions, formulary coverage, and other design features, beneficiaries may find it difficult to select a PDP that best meets their needs. To enroll in the plan with the best coverage and the lowest out-of-pocket costs, Part D enrollees need to understand factors beyond premium and deductible costs, including copayment and coinsurance structure, coverage gap (doughnut hole) protection, and catastrophic coverage costs. However, many Medicare beneficiaries, particularly low-income and other vulnerable populations, lack the knowledge and experience to select a PDP that best suits their needs. The CMS will facilitate autoassignment and enrollment of LIS and dual-eligible (dual-eligible individuals are those with full Medicaid and Medicare benefits) recipients into a Part D plan. This autoassignment and enrollment is a random process, and a limited number of plans qualify for having LIS or dual-eligible beneficiaries assigned to them. These plans are called benchmark plans. The autoassignment and enrollment process fails to take into account the prescription history or medication needs of the beneficiary. However, those who receive the LIS or are dual eligible have increased flexibility when selecting a Part D plan and in fact may switch plans at any time throughout the course of the year.

For those who must choose a Part D plan or those who want to reevaluate their Part D plan annually, the sole way to compare plans is through the Plan Finder tool (<http://www.>

medicare.gov) located on the Medicare Web site, a challenge for 54% of beneficiaries who lack Internet access.<sup>8</sup> Beneficiaries who rely on the CMS hotline (1-800-MEDICARE [1-800-633-4227]) may find obtaining information difficult if they have low literacy skills or are not fluent in English. A recent study<sup>9</sup> of 112 seniors, all English-speaking with

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Given their accessibility, knowledge of prescription drugs, and understanding of Part D, pharmacists are in an ideal position to serve as Part D patient advocates. In addition, the American Association of Colleges of Pharmacy<sup>10</sup> states that pharmacy educators should teach their students to serve society as caring ethical professionals and as enlightened citizens. Finally, the most recent Accreditation Council for Pharmacy Education<sup>11</sup> accreditation standards reflect the increasing value of training student pharmacists to provide patient-centered care during their professional graduate education. Given these factors, Partners in D, a statewide research program among 7 schools of pharmacy in California, was developed by the faculty at the University of California, San Francisco School of Pharmacy to train student pharmacists to assist underserved Medicare beneficiaries in various ways, including distinguishing which PDP may result in the lowest out-of-pocket cost, explaining plan formulary changes, describing a plan's cost-sharing structure, and identifying duplicative or unnecessary drug therapy.

The research reported herein examines our efforts to enable seniors who were enrolled in a Part D plan to select a PDP that minimized their out-of-pocket expenditures. This study used a cost-minimization analysis (CMA) to determine whether and to what extent student pharmacists' interventions reduce out-of-pocket PDP costs for Medicare beneficiaries.

Cost-minimization analysis is a pharmacoeconomic method that has been increasingly adopted by studies reported in the medical literature. Examination of the number of articles using CMA revealed an increase of almost 100% in the 5-year period from 2001 to 2005 (212 articles in PubMed and 657 articles in SCOPUS) compared with 1996 to 2000 (122 articles in PubMed and 366 articles in SCOPUS).<sup>12,13</sup> A CMA is undertaken when outcomes between comparator groups are equivalent. In clinical studies in which a CMA is performed,

investigators have assumed<sup>14-16</sup> or proven<sup>17-19</sup> that outcomes between differing treatments or interventions were equivalent. As such, the ultimate goal of a CMA is to determine which treatment or intervention minimizes cost.

## METHODS

### Study Design

This study was a cross-sectional CMA of beneficiary annual out-of-pocket Part D expenditures. We sought to reduce beneficiary spending by identifying the PDP resulting in the lowest estimated annual cost given the beneficiary's current prescription drug regimen. This was compared with the estimated out-of-pocket costs that the beneficiary would have incurred if he or she did not change his or her current PDP. Potential cost savings for each beneficiary were calculated as follows:

- Potential annual cost savings
- = the cost of staying in the current PDP in 2008
- the cost of the least expensive PDP in 2008.

The study intervention was performed without making any changes to a beneficiary's prescription drug regimen. As such, outcomes were not expected to change, and a CMA was conducted.

One of the collaborating schools of pharmacy was unable to participate in this part of the study. Therefore, in total, 22 outreach events were conducted by 6 schools of pharmacy in California (Loma Linda University, University of California–San Diego, University of California–San Francisco, University of the Pacific [Stockton], University of Southern California [Los Angeles], and Western University of Health Sciences [Pomona]) between November 3, 2007, and December 31, 2007 (the end of open enrollment for Part D PDPs in 2007). Most beneficiaries may only change their Part D PDP during the open enrollment window (November 15 to December 31). Approval to conduct this research was obtained by the institutional review boards at all 6 schools of pharmacy.

### Study Population

Data were collected from 250 beneficiaries at the time they attended 1 of 22 statewide outreach events. Beneficiaries were excluded if it was discovered that they were enrolled in a Medicare Advantage Prescription Drug plan or had other creditable coverage provided from a current or former employer, union, or other source as good as or better than Medicare Part D (n = 72). In addition, those beneficiaries who were not recognized by the Medicare Web site when attempting to conduct a personalized plan search or whose

prescription drug profile was incomplete at the time of the intervention were excluded from analysis, as their current PDP and cost information could not be determined (n = 23). Although outreach events were targeted toward vulnerable populations (low income and low educational level, limited or no English proficiency, etc), beneficiary demographic or clinical characteristics were not used as inclusion or exclusion criteria. Ultimately, data from 155 outreach participants were included in the CMA.

### Part D Consultations

Beneficiary consultations were provided by trained student pharmacists throughout California during community outreach events under the supervision of faculty pharmacist preceptors. Students typically worked in pairs during an outreach event, with one completing the study-specific data collection form, while the other entered beneficiary demographic information and specific prescription drug data (eg, drug name, strength, and quantity dispensed per interval) into the Plan Finder tool. During the intervention, a personalized plan search was performed to ensure that the beneficiary's current PDP and specific subsidies recognized by Medicare were compared with other plan options available to the beneficiary. When conducting a personalized plan search, the beneficiary's current PDP is listed first. Thereafter, all other PDP offerings are listed in ascending order based on estimated annual cost (ie, least to most expensive). The estimated annual cost includes beneficiary copayments or coinsurance, deductible, plan premium, and, if applicable, the amount paid in the coverage gap and for catastrophic coverage.

Beneficiary prescription drug information (eg, medication name, strength, dosage, and frequency of use) was entered into the Plan Finder tool in a systematic and rigorous manner, as minor variations in such information are likely to result in the reporting of different estimated annual plan costs. If the patient had a preference for a particular pharmacy, this was entered into the Plan Finder tool as well to ensure that he or she could continue to receive care from that pharmacy. Once all of the required information was entered into the Plan Finder tool, available Part D PDP options that were available through their pharmacy of choice (including mail-order options) were presented to the beneficiary and evaluated in consultation with the student pharmacists. Plan-specific quality ratings were inconsistently reported during the 2007 open enrollment period, so these were not considered for this study.

### Data Collection

Demographic and clinical information was collected from each beneficiary through the use of a standardized survey. The

**Table 1.** Demographic and Clinical Characteristics of Study Participants

Demographic and Clinical Characteristic	Value (N = 155)
<b>Sex, No. (%) (n = 154)</b>	
Female	93 (60.0)
Male	61 (39.4)
<b>Age, mean (SD), y (n = 154)</b>	74.6 (8.7)
<b>Race/ethnicity, No. (%) (n = 154)</b>	
Asian	69 (44.5)
White, non-Hispanic	52 (33.5)
Hispanic	17 (11.0)
Black or African American	9 (5.8)
Other	7 (4.5)
<b>Preferred language, No. (%) (n = 155)</b>	
English	87 (56.1)
Vietnamese	20 (12.9)
Cantonese	15 (9.7)
Spanish	9 (5.8)
Tagalog	7 (4.5)
Other	17 (11.0)
<b>Marital status, No. (%) (n = 153)</b>	
Not married	79 (51.0)
Married	74 (47.7)
<b>Highest level of education, No. (%) (n = 153)</b>	
<High school	62 (40.0)
High school graduate or equivalent	25 (16.1)
≥Some college	66 (42.6)
<b>Prescription drug coverage subsidy status, No. (%) (n = 147)</b>	
Medicare and Medicaid dual enrolled	85 (54.8)
LIS enrolled	5 (3.2)
LIS eligible	14 (9.0)
Not LIS or Medicaid enrolled or eligible	43 (27.7)
<b>No. of prescription drugs each month per participant, mean (SD) (n = 148)</b>	5.3 (3.5)

LIS indicates low-income subsidy.

survey also provided space to record the name of and cost information for the beneficiary's current PDP, as well as for the lowest-cost plan for 2008. The survey also contained questions designed to assess each beneficiary's eligibility for the LIS and the outcomes of each consultation (eg, whether the PDP was changed or not). The survey was available in several different languages (English, Chinese, Korean, Vietnamese, Tagalog, Russian, and Spanish) and when possible was administered by students who were fluent in the beneficiary's native language so as to best accommodate the needs of outreach participants.

was Asian (44.5%). When asked their preferred language, participants identified 12 different languages. More than 50% of study participants were unmarried, and most of those (55.7%) were widowed. The education variable revealed a bimodal distribution in which 40.0% of participants had less than a high school education and 42.6% had completed at least some college. The mean (SD) number of prescriptions each month per participant was 5.3 (3.5), with 2 individuals reporting taking 0 prescription medications (minimum) and 1 individual reporting taking 26 prescription medications (maximum). Most outreach participants (54.8%) were dual-eligible beneficiaries.

### Statistical Analysis

Descriptive statistics were used to summarize demographic characteristics of the participants. Cost data were not normally distributed. As such, Kruskal-Wallis and Mann-Whitney rank sum tests were used to determine if differences in cost data existed as a function of beneficiary demographic characteristics. All significance calculations were based on a 95% confidence interval at  $\alpha = .05$ . Data analyses were performed using commercially available statistical software (SPSS, version 15.0; SPSS Inc, Chicago, IL).

### RESULTS

**Table 1** gives the demographic and clinical characteristics of 155 study participants. While most were aged between 65 and 85 years, 7.1% were younger than 65 years and able to qualify for Medicare by some reason other than age (eg, end-stage renal disease or permanent disability), and 14.8% of study participants were classified as the oldest old (>85 years). Race/ethnicity was similarly diverse. The most common race/ethnicity of study participants

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**Table 2.** Annual Potential Cost Savings by Demographic and Clinical Characteristics of Study Participants

Demographic and Clinical Characteristic	Annual Potential Cost Savings If Switched From the Current Plan to the Lowest-Cost Plan Identified for 2008, \$					P
	Minimum	25th Percentile	Median	75th Percentile	Maximum	
<b>Sex (n = 154)</b>						.06
Female (n = 93)	0.00	31.50	82.00	361.50	2911.00	
Male (n = 61)	0.00	42.40	146.00	729.00	9849.00	
<b>Age, y (n = 154)</b>						.14
<75 (n = 80)	0.00	27.80	96.00	321.50	3003.00	
≥75 (n = 74)	0.00	38.00	126.50	610.50	9849.00	
<b>Race/ethnicity (n = 154)</b>						<.001
Asian (n = 69)	0.00	15.50	46.80	192.00	1685.00	
White, non-Hispanic (n = 52)	0.00	93.75	326.50	831.00	9849.00	
Other (n = 33)	0.00	42.50	122.00	433.50	2911.00	
<b>Preferred language (n = 155)</b>						<.001
English (n = 87)	0.00	77.00	261.00	533.00	9849.00	
Not English (n = 68)	0.00	15.25	46.40	131.75	2222.00	
<b>Marital status (n = 153)</b>						.81
Not married (n = 79)	0.00	36.00	98.00	388.50	9849.00	
Married (n = 74)	0.00	30.50	110.00	459.75	3086.00	
<b>Highest level of education (n = 153)</b>						.22
<High school (n = 62)	0.00	17.50	76.50	339.25	3003.00	
High school graduate or equivalent (n = 25)	0.00	52.00	125.00	460.50	3086.00	
≥Some college (n = 66)	0.00	39.50	134.00	426.25	9849.00	
<b>No. of prescription drugs each month per participant (n = 148)</b>						.02
<3 (n = 25)	0.00	22.80	79.00	335.00	580.00	
3-7 (n = 98)	0.00	31.00	96.50	406.00	2911.00	
>7 (n = 25)	0.00	97.00	318.00	1349.00	9849.00	
<b>All study participants (N = 155)</b>	0.00	35.00	98.00	400.00	9849.00	

Univariate analysis (Table 2) of beneficiary demographic and clinical characteristics showed statistically significant differences in median annual potential cost savings by race/ethnicity ( $P < .001$ ), preferred language ( $P < .001$ ), and total number of prescription medications ( $P = .02$ ). For those who reported taking fewer than 3 medications (16.9%), the median potential annual savings totaled \$79 versus a median potential annual savings of \$318 (>4-fold increase) for those who reported taking more than 7 medications (16.9%). The contrast is even greater when the maximum potential savings are considered, with almost a 17-fold differential (\$580 vs \$9849) between these 2 groups.

As summarized in Table 3, dual-eligible and LIS beneficiaries were likely to incur significantly lower out-of-pocket PDP costs

than beneficiaries who were not receiving subsidized financial assistance. In addition, beneficiaries who were not dual eligible or enrolled in the LIS had greater individual potential PDP cost savings (when looking at total US dollar savings) by switching to the least expensive plan identified for 2008. However, those who were dual eligible or enrolled in LIS had the highest potential savings when the proportional decrease in cost was compared with baseline. In fact, dual-eligible and LIS-enrolled individuals had a statistically significant decrease (45.6% and 48.5%, respectively) in costs from baseline compared with those who were not dual eligible or LIS enrolled (28.6%).

In total, 89.7% of beneficiaries could have realized cost savings by switching to a different PDP. Differences were

■ **Table 3.** Annual Plan Costs and Potential Cost Savings of Study Participants by Subsidy Level

Annual Prescription Drug Plan Costs	Medicare and Medicaid Dual Enrolled (n = 85)	LIS Enrolled (n = 5)	LIS Eligible (n = 14)	Not LIS or Medicaid Enrolled or Eligible (n = 43)	P
<b>Current (2007) plan for 2008, \$</b>					
Minimum	1.20	318.00	113.00	228.00	
25th Percentile	99.00	390.50	424.25	617.00	
Median	164.00	862.00	1283.00	1250.00	<.001
75th Percentile	258.50	1738.50	2095.75	2844.00	
Maximum	4571.00	2444.00	4406.00	14,830.00	
<b>Least expensive plan for 2008, \$</b>					
Minimum	0.00	114.00	74.00	120.00	
25th Percentile	37.00	191.50	274.25	463.00	
Median	112.00	367.00	750.50	781.00	<.001
75th Percentile	168.50	625.50	1437.00	2844.08	
Maximum	4472.00	715.00	4237.00	5676.00	
<b>Individual potential savings by switching to the least expensive plan identified for 2008, \$</b>					
Minimum	0.00	96.00	0.00	0.00	
25th Percentile	15.50	150.00	45.00	146.00	
Median	46.80	318.00	352.00	319.00	<.001
75th Percentile	104.00	1250.00	487.00	533.00	
Maximum	3086.00	2175.00	1421.00	9849.00	
<b>Relative potential cost savings, mean (SD), %</b>	45.6 (46.5)	48.5 (27.8)	26.8 (22.5)	28.6 (23.0)	.04

LIS indicates low-income subsidy.

observed in annual potential cost savings based on whether study participants switched their Part D PDP during the outreach intervention (Table 4). Those beneficiaries who chose to switch plans on-site during an outreach intervention were likely to realize significantly higher annual cost savings compared with those who did not ( $P < .001$ ). Because some outreach events occurred before the onset of open enrollment (November 15), not all 155 participants were eligible to switch Part D plans during an outreach event. However, 44.7% of 123 participants who were eligible to switch plans during an outreach intervention did so. Trends between those who did or did not switch plans were independent of any beneficiary demographic or clinical characteristic (data not shown).

## DISCUSSION

The median annual potential cost savings for all study participants were \$98 (Table 2). However, the mean annual potential cost savings for these same 155 participants were much higher (\$431 [data not shown]), reflecting the positive-

ly skewed nature of these data. We posit that the \$98 median annual potential cost savings are largely due to our efforts to target the dual-eligible (Medicare and Medicaid) population through our outreach efforts. In fact, beneficiaries who were dual eligible were expected to save less (median savings, \$47) by switching their PDP to the least expensive plan in 2008 than beneficiaries who were ineligible to receive some type of government assistance (median savings, \$319) (Table 3). This is understandable because dual-eligible beneficiaries already receive financial assistance to offset the cost of their prescription medications. However, the potential benefit of switching to the least expensive PDP is a finding that is not limited to those beneficiaries without a subsidized Part D benefit. In fact, the expected proportional annual mean PDP cost savings to dual-eligible beneficiaries (45.6%) or to those already enrolled in the LIS (48.5%) are significantly greater than the cost savings to those who were not LIS or Medicaid eligible (28.6%). All individuals receiving extra help have a subsidized benefit at 2 of 4 LIS levels. Three LIS categories have fixed copayments for brand and generic medications. Therefore, one might expect beneficiaries in these 3

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**Table 4.** Annual Potential Cost Savings to Study Participants Based on Whether Their Plans Were Switched During the Outreach Intervention

Individual Potential Savings by Switching to the Least Expensive Plan Identified for 2008, \$	Switched Plans During the Outreach Intervention (n = 55)	Did Not Switch Plans During the Outreach Intervention (n = 68)	Total (n = 123)	P
Minimum	0.00	0.00	0.00	
25th Percentile	52.00	0.30	28.00	
Median	150.00	43.00	92.00	<.001
75th Percentile	641.00	251.50	397.00	
Maximum	3086.00	9849.00	9849.00	

categories to have the same benefit if enrolled into any one of the available benchmark plans. However, our findings reveal that this was not the case. Significant cost savings could be achieved by recommending a particular benchmark plan, as each had a unique formulary, and the beneficiary may have been autoassigned to a plan that did not cover all of their medications, resulting in higher out-of-pocket expenses. There are also benchmark plans that offer \$0 copayments for generic medications, another potential cost savings. Therefore, while the outreach participants who were not receiving any type of governmental assistance with the cost of their prescription medications were expected to save more in absolute US dollars, the low-income beneficiaries (dual eligible or LIS enrolled) were expected to save more in relative (percentage) US dollars with regard to their annual PDP costs as a result of the student pharmacist interventions. In summary, the aggregate annual potential cost savings if each study participant (n = 155) switched from his or her current PDP to the least expensive plan identified for 2008 totaled \$66,805 (cost minimization). In addition, the 55 individuals who switched plans at an outreach event were expected to save a total of \$28,658 on their out-of-pocket costs in 2008.

While most outreach participants were receiving some type of government-subsidized financial assistance with the cost of their prescription medications, 36.8% (n = 57) of 155 participants were not receiving any such financial aid at the time of the intervention (Table 3). During community outreach efforts, 24.6% (14 out of 57) of outreach participants who were not already receiving any type of governmental assistance with their Part D plan costs (eg, dual-eligible or LIS enrolled) were identified as potentially eligible for the LIS. Based on income and asset information provided by study participants, pharmacy students were able to provide information about the LIS to all 14 eligible applicants and were able to help 6 of the 14 complete their LIS applications online. Enrollment in LIS is a cost-minimization strategy, as receiving the subsidy can dramatically decrease patients'

out-of-pocket costs and eliminates the coverage gap for those enrolled.

Most noteworthy is our finding that only 10.3% of participants were enrolled in the lowest-cost PDP available to them. We were able to collect feedback from 41.9% (n = 65) of beneficiaries with regard to their suboptimal plan selection. Nineteen individuals (29.2%) were autoenrolled into a plan by Medicare, 14 individuals (21.5%) decided to pick a Part D plan after consulting with family or friends, and 13 individuals (20.0%) chose their Part D plan after feedback from sources such as insurance representatives or agents, while 12 individuals (18.4%) provided other reasons for selecting their plan and 7 individuals (10.8%) reported being unaware of how they picked their plan or received help from healthcare professionals (eg, physicians, pharmacists, or social workers) when selecting a Part D plan. We posit other reasons for the extremely low percentage of outreach participants who were enrolled in the lowest-cost plan. The responsibility may lie with the participants, who may be unwilling to search for a better plan. Many beneficiaries express satisfaction with their current plan and may see no need to delve into the complexity of the Part D enrollment process to search for another plan on an annual basis.<sup>19</sup> This is most likely the case among those for whom potential savings were modest. In addition, the Medicare program may share in the responsibility. As previously mentioned, the CMS will automatically assign or facilitate enrollment for those who receive LIS or have both Medicare and Medicaid coverage. In such cases, an individual's medications are not matched to any plan formulary; therefore, patients may be assigned to plans that do not cover their prescription drugs. In addition, plans change on an annual basis, and an individual who was enrolled in a plan that covered all their medications one year may find that the plan does not cover all their medications or places them on a different tier the following year. Finally, the CMS will reassign a patient to a new plan if his or her plan does not fit the established benchmark threshold for the coming year. Therefore,

individuals who were assigned to a plan by the CMS may not have been assigned to the lowest-cost plan. To the extent that the low percentage of lowest-cost enrollment is due to a lack of knowledge or a lack of access to proper information, the Medicare program must find ways to improve communication (eg, explanatory and educational materials and the use of appropriate media) to these vulnerable populations.

Our findings further revealed the cost of inertia for Part D beneficiaries. Specifically, participants who switched plans during an outreach intervention were likely to save significantly more (median savings, \$150) than participants who did not make the switch on-site (median savings, \$43) (Table 4). It can be gathered that those who chose to remain in their current PDP, despite counseling that another PDP may result in lower out-of-pocket costs, thought that the potential money saved by switching PDPs did not justify such a change.

From a policy perspective, much work remains to be done to increase the percentage of individuals enrolled in the least expensive Part D plan, thereby minimizing beneficiary out-of-pocket expenditures. Annual plan changes and reassignment by the CMS of LIS or Medicare and Medicaid recipients render the need for annual plan evaluation even more important. As our study findings suggest, student pharmacists have the ability to provide community-based interventions that reduce out-of-pocket costs among Medicare populations by guiding beneficiaries to the lowest-cost PDP plan. If these initial results are replicated in a larger second-generation study, pharmacy schools across the country should consider developing similar community-based Part D interventions into their curricula.

By expanding this training program to schools of pharmacy across the nation, academe can create a cohort of trained pharmacists who will enter practice with the knowledge and skills to assist these vulnerable populations. Given the level of savings achieved, a potential collaboration in this endeavor between pharmacy schools and the CMS seems to be a mutually beneficial partnership that should be considered.

### Limitations

A potential limitation of this cross-sectional study design is that PDP costs were estimated based on a patient's drug regimen at the time of the outreach intervention. A patient's prescription drug needs may change throughout the course of the year (eg, treatment of an acute condition); therefore, recorded costs were an estimation of the actual 2008 costs incurred. This study did not identify and record the results of other student pharmacist-driven interventions such as recommendation of an over-the-counter product or a lower-cost therapeutic equivalent. Because of the nature of this study, participant follow-up was not possible. As such, we are unable

to determine how many individuals who were identified by student pharmacists as potentially eligible for the LIS did in fact go on to receive the subsidy. Furthermore, we are unaware of whether participants decided to switch plans outside of the outreach event based on the student pharmacist recommendations. Finally, though these initial results are provocative, a larger study should be conducted to determine if these findings are reproducible and generalizable.

## CONCLUSIONS

The CMA revealed that a high percentage (90.3%) of beneficiaries were not enrolled in the lowest-cost Medicare Part D plan. This finding emphasizes the need for annual reevaluation of Part D plan offerings by Medicare beneficiaries. Our study results further indicate that Part D community outreach interventions performed by trained student pharmacists can help Medicare beneficiaries to navigate their Part D benefit effectively. In their capacity as patient advocates, these trained pharmacy students may have a pivotal role in reducing out-of-pocket costs for Part D beneficiaries. Although the largest absolute potential cost savings could be expected for those participants without a subsidized benefit (non-dual-eligible and non-LIS beneficiaries), those with a subsidized benefit can potentially realize a greater percentage of cost savings.

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