Racial/Ethnic Disparities in Medicare Part D Experiences

Amelia M. Haviland, PhD,*† Marc N. Elliott, PhD,‡ Robert Weech-Maldonado, PhD,\$ Katrin Hambarsoomian, MS,‡ Nate Orr, MA,‡ and Ron D. Hays, PhD‡||

Objective: To examine racial/ethnic differences in Medicare beneficiary experiences with Medicare Part D prescription drug (PD) coverage.

Data Sources/Study Setting: 2008 Consumer Assessment of Health Care Providers and Systems survey of U.S. Medicare beneficiaries.

Study Design: Surveys were administered by mail with phone follow-up to a nationally representative sample (61% response rate). This study examines 201,496 beneficiaries of age 65 and older with PD coverage [6% Hispanic, 7% non-Hispanic Black, 3% non-Hispanic Asian or Pacific Islander (API)]. Key variables are self-reported race/ethnicity and Consumer Assessment of Health Care Providers and Systems getting information and needed PDs measures.

Data Collection/Extraction Methods: We generated weighted case-mix adjusted means for 4 racial/ethnic groups and for Hispanics separately by English-language or Spanish-language preference status. We calculated within-plan disparities using a linear mixed-effect model, with fixed effects for race/ethnicity, coverage type and case-mix variables, and random effects for contract and contract by race/ethnicity interactions.

Principal Findings: Disparities for Hispanic, Black, and API beneficiaries on obtaining needed PDs and information regarding coverage range from -2 to -11 points (0–100 scale) relative to non-Hispanic Whites, with the greatest disparities observed for Spanish-preferring Hispanics and API beneficiaries, especially those with low income. There is wide variation in disparities across contracts, and contracts with the largest disparities for Hispanics have higher proportions of beneficiaries with lower education and income.

Conclusions: Quality improvement efforts may be needed to reduce racial/ethnic disparities in beneficiary experience with PD coverage. Cultural, language, and health literacy barriers in navigating

From the *H. John Heinz III College, Carnegie Mellon University; †RAND Corporation, Pittsburgh, PA; ‡RAND Corporation, Santa Monica, CA; \$Department of Health Services Administration, University of Alabama at Birmingham, Birmingham, AL; and ||Department of Medicine/Division of General Internal Medicine & Health Services Research, UCLA, Los Angeles, CA.

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Reprints: Marc N. Elliott, PhD, RAND Corporation, 1776 Main St., P.O. Box 2138, Santa Monica, CA 90407. E-mail: elliott@rand.org.

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Medicare's Part D program may partially explain the observed disparities.

Key Words: disparities, prescription drug coverage, Medicare, CAHPS surveys

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Research consistently demonstrates that racial/ethnic minorities experience disparities in patient experience at multiple levels of care, including insurance plans, hospitals, and individual providers. Minority and low socioeconomic status (SES) patients of all ages also have poorer health outcomes for a wide variety of conditions than their non-Hispanic White or higher SES counterparts. In particular, racial/ethnic disparities in both clinical process measures and patient experiences of care are well documented in the Medicare population. 2-4

In some cases these racial/ethnic health disparities can be linked to differential access or selection into plans or providers of differing quality. For instance, Black race and Hispanic ethnicity, lower income and educational attainment, poor health status and older age have been associated with problems related to health care insurance and access.^{5,6} Goldstein et al⁷ reported that non-Hispanic Whites receive care from hospitals that provide better experiences on average for all patients than the hospitals more often used by nonWhite patients. Weech-Maldonado et al⁸ similarly found that Blacks, Hispanic-Spanish speakers, and Native Americans are more likely to be concentrated in Medicaid-managed care plans than the White English speakers, which provide worse patient experiences on average for all beneficiaries than those in which non-Hispanic White patients were more often enrolled.

Other possible explanations for racial/ethnic health disparities might apply to patients within the same plans, hospitals, or individual providers, and might include language and communication issues for patients for whom English is not their primary language or who have limited health literacy. Another possibility for racial/ethnic disparities might be differential treatment by providers and plans on the basis of the patient characteristics.

The Medicare Prescription Drug, Improvement, and Modernization Act of 2003 created prescription drug (PD) coverage for Medicare beneficiaries through a new Part D program, the largest single addition to Medicare since its creation in 1965. This legislation restructured PD coverage for all Medicare beneficiaries and granted coverage to many

previously uncovered beneficiaries. Starting in 2006, Medicare beneficiaries could select PD coverage through a standalone prescription drug plan (PDP) if they were enrolled in traditional fee-for-service (FFS) Medicare or as an integrated option for beneficiaries in a Medicare Advantage (MA) contract (MA-PD).

In 2008, 19% of beneficiaries were enrolled in MA,¹¹ which increased to 25% by 2011. 12 Most MA contracts offer PD coverage and 87%/90% of MA beneficiaries in 2008/ 2011 were enrolled in an MA-PD contract.¹³ FFS beneficiaries and enrollees of the few MA contracts that do not offer PD coverage (such as private-fee-for-services contracts) are eligible to enroll in stand-alone PDPs. In 2008 and 2011, about half of FFS beneficiaries were enrolled in a PDP. 13 Many of these PDP contracts are geographically extensive, with enrollment sometimes spanning many states. Part D contracts, either MA-PD or PDP, consist of ≥ 1 benefit packages offered by a single sponsor. Nationally, there were approximately 650/800 PD contracts (MA-PD and PDPs combined) in 2008/2010 though the majority of Part D enrollees (72%/73% in 2006/2011) were enrolled in contracts operated by only 10 sponsors. ^{13,14} A low-income subsidy that reduces Part D costs to the beneficiary is provided automatically to all Medicaid-eligible beneficiaries plus to additional low-income beneficiaries who provide evidence of income <150% of the Federal Poverty Level and limited assets.¹⁵

The 2 types of Part D coverage, stand-alone PDPs and MA-PDs, have quite different structures. The first is a private Medicare plan just for PD coverage independent of a beneficiary's usual FFS Medicare coverage. The second is an integrated part of a MA plan, a private managed care plan, managed by a private health insurance carrier that provides coverage for all types of health care. For those in MA plans, the transition to MA-PD tended to be subtle; these beneficiaries already had a private managed care plan, whereas FFS beneficiaries were considering a separate, new, private PDP.

Although some have criticized the cost of the Medicare Part D program, recent studies have pointed to the value the program provides in both patient health and in dollar terms. Afendulis et al¹⁶ found that the implementation of the Medicare Part D program was followed by a 4% reduction in hospitalization rates for 8 medication-sensitive conditions in 2006 and 2007. Another study estimates savings in hospital and nursing home costs of about \$1200 per newly insured Part D beneficiary, implying overall savings to Medicare of \$13.4 billion in 2007, the first full year of the Part D program.¹⁷

In the context of pervasive racial/ethnic disparities for patients of all ages and in particular in patient experiences of Medicare beneficiaries, there is a natural concern about the experiences of racial/ethnic minority beneficiaries with the recently restructured Medicare Part D plans. The new PD coverage options represent a major innovation in the Medicare program, but one with considerable complexity. Some theories suggest that those best positioned to benefit from innovations, at least initially, are those with the most initial advantages, although such innovations may eventually reduce disparities. This suggests that racial/ethnic groups that

face additional challenges in health care settings may be at a disadvantage, particularly vulnerable subgroups, such as those with lower SES and language preferences other than English. For instance, the large number of PDPs and MA-PDs available to most beneficiaries creates a potentially challenging enrollment choice for beneficiaries, ¹⁸ many of whom have multiple or evolving PD needs. Each PDP and MA-PD has its own formulary and negotiated price structure for prescriptions and premiums, creating potential language and "health literacy" barriers. Hence, any racial/ethnic disparities may vary by beneficiary SES or preferred language. In addition, as the structure and degree of change because of innovations in PD coverage vary dramatically by coverage type, racial/ethnic disparities may also vary by coverage type, and perhaps contract-to-contract.

In particular, our goal in this study was to determine the extent to which Hispanic, Black, and Asian or Pacific Islander (API) Medicare beneficiaries report different experiences with Medicare Part D PD coverage than non-Hispanic White beneficiaries using a large and nationally representative dataset. Findings may inform Centers for Medicare and Medicaid Service's (CMS's) quality improvement and equity efforts and decisions regarding racial/ethnic-specific public reporting. We posed the following research questions:

- Are there disparities in Part D experiences for Hispanics, non-Hispanic Blacks, and non-Hispanic APIs relative to non-Hispanic Whites?
- 2. Are disparities consistent across the 2 Part D coverage types (stand-alone PDP vs. MA-PD)?
- 3. Do disparities differ by SES and Spanish language preference?
- 4. How much variation is there in racial/ethnic disparities across Part D contracts?

METHODS

Study Sample

We used the 2008 Medicare Consumer Assessment of Health Care Providers and System (CAHPS®) survey sample with 407,543 completed surveys (61% response rate). This is a nationally representative stratified random sample of Medicare beneficiaries, with contracts (informally "plans") serving as strata. We focus on the 231,597 Hispanic, non-Hispanic White, non-Hispanic Black, and non-Hispanic API Medicare beneficiaries with PD coverage, age 65 or older, and residing in the continental United States, who had used their PD coverage to obtain prescription medicine in the preceding 6 months. Beneficiaries in Puerto Rico and the Virgin Islands were excluded because of substantial health care differences from the continental US.20 The following additional exclusions were applied: 29,421 cases (13%) who reported any proxy assistance in responding, 1 case with unknown survey language, 281 Spanish surveys from non-Hispanic respondents, and 398 cases with unknown Medicaid eligibility status, leaving 201,496 beneficiaries (6% Hispanic, 7% non-Hispanic Black, 3% non-Hispanic API, and 84% non-Hispanic White) from 338 MA-PD and 74 stand-alone PDP contracts (Table 1). The study

TABLE 1. Beneficiary Characteristics by Race/Ethnicity, Medicare Advantage-Prescription Drug and Stand-Alone Prescription Drug Plan Beneficiaries Age 65 and Older (Weighted %)

	Overall (n = 201,496) (%)	White* (n = 167,321) (%)	Hispanic [†] (n = 13,373) (%)	Black [‡] (n = 15,742) (%)	API [§] (n = 5060) (%)
MA-PD	29	28	41	33	34
Medicaid eligible	17	12	46	42	44
Spanish-preferring	2	0	31	0	0
Age					
65–74 (reference)	53	52	59	61	54
75–79	21	21	21	20	23
80–84	15	16	13	12	15
85 or older	11	11	7	7	8
Self-rated general health					
Excellent	8	8	11	6	7
Very good	28	29	19	18	25
Good (reference)	37	37	33	37	40
Fair	22	20	30	32	23
Poor	5	5	7	8	5
Self-rated mental health					
Excellent	32	33	27	24	26
Very good	34	36	25	28	34
Good (reference)	26	25	30	32	29
Fair	7	5	16	13	9
Poor	1	1	2	2	2
Sex					
Male	37	37	40	29	54
Female (reference)	62	62	60	71	45
Unknown	0	0	0	1	1
Education					
Less than eighth grade	9	6	36	17	7
Some high school	13	12	17	28	9
High school diploma/GED (reference)	35	37	22	30	21
Some college or 2-y degree	23	24	15	16	19
4-y college graduate	9	10	5	4	22
More than 4-y college degree	10	11	5	5	22
Census region					
Northeast	19	19	15	19	14
Midwest	24	27	7	17	7
South	35	34	37	54	13
West (reference)	23	21	41	10	66

^{*}non-Hispanic White.

protocol was approved by the RAND Institutional Review Board and the CMS Privacy Board.

Outcome Measures

CMS publicly reports 3 measures of experiences with Medicare Part D: a global rating of the PD plan/coverage and 2 multi-item composite measures about access to and information about prescription medications. Because prior work suggests racial/ethnic differences in scale use for the 0–10 global rating scale, ^{21,22} this paper uses only the 2 composites, which employ a *Never/Sometimes/Usually/Always* response scale.

One composite assessed experiences getting needed PDs with 3 questions: in the last 6 months, how often was it easy to use your plan to (1) get the medicines your doctor prescribed?; (2) fill a prescription at your local pharmacy?; and (3) fill a prescription by mail? The 4-item composite

regarding experiences getting information from the plan about PD coverage and cost asked: in the last 6 months, how often (1) did your plan give you all the information you needed about which medicines were covered?; (2) did your plan give you all the information you needed about how much you would have to pay for your prescription medicine?; (3) did your plan's customer service give you the information or help you needed about PDs?; and (4) did your plan's customer service staff treat you with courtesy and respect when you tried to get information or help about PDs?

Responses to each question were transformed linearly to a possible range of 0–100 and averaged within composites. Martino et al²³ report Cronbach α of 0.87 for the getting information composite and 0.65–0.67 for the getting needed PD composite for stand-alone PDPs and MA-PDs. Although the internal consistency reliability for the second composite falls just short of the typical 0.70 standard,

[†]Hispanic of any race.

[‡]non-Hispanic Black.

⁽non-Hispanic) Asian or Pacific Islander.

General educational development high school equivalency certificate.

MA-PD indicates Medicare Advantage-prescription drug.

corrected item-scale correlations exceeded the usual 0.40 cutoff for all items.

Measures of Race/Ethnicity and Survey Language

Race and ethnicity were determined from 2 items. Hispanic ethnicity was assessed using the standard Office of Management and Budget item (Are you of Hispanic or Latino origin or descent?). Race was measured using an item with 5 response options: White, Black or African American, Asian, Native Hawaiian or other Pacific Islander, and American Indian or Alaska Native. Respondents who endorsed Hispanic or Latino ethnicity were classified as Hispanic. Those responding "no" to Hispanic ethnicity were classified as non-Hispanic White, non-Hispanic Black, non-Hispanic API, or in a multiracial category if ≥ 1 race was reported, or unknown if no race was indicated. In what follows we refer to beneficiaries in the first 4 categories as Hispanic, White, Black, and API, and exclude multiracial beneficiaries and those with unknown race. In some analyses, the Hispanic group is further divided by survey completion language (English or Spanish). In the mainland US, beneficiaries received a bilingual postcard describing the survey and indicating how to request a Spanish survey. This was followed by up to 2 mailings of the English survey, or Spanish language survey if requested. Mail nonrespondents were contacted by phone, with bilingual interviewers and a computerassisted telephone interview administration available.

Independent Variables

We adjusted all results with standard Medicare CAHPS case-mix adjustors²⁴ and additional characteristics that differ between racial/ethnic groups and may be related to the outcome measures. Five independent variables were self-reported by beneficiaries: sex (*Are you male or female?*), age (10 response options, of which the categories 65–74, 75–79, 80–84, and 85 or older were used in these analyses), highest completed grade or level of school (eighth grade or less; some high school, but did not graduate; high school graduate or General educational development; some college or 2-year degree; 4-year college graduate; more than 4-year college degree), overall health (Excellent, Very good, Good, Fair, or Poor), and overall mental health (same response options as overall health).

The variables derived from administrative data were coverage type (MA-PD vs. stand-alone PDP); indicators for each MA-PD or stand-alone PDP contract; Medicaid eligibility; and census region of residence. Here we use Medicaid eligibility as a low-SES indicator.

Analysis

Using linear regression we calculated case-mix adjusted means of the 2 PD measures for each of the 4 racial/ethnic groups (Hispanic, API, Black, and White), and for Hispanics separately by English preferring or Spanish preferring. The means were case-mix adjusted for sex, age, education, overall health, overall mental health, Medicaid eligibility, and census region. We generated case-mix adjusted disparity estimates pooled over coverage type and for the stand-alone PDP and MA-PD beneficiaries separately by

stratifying the above model. Next, we checked for differences in disparities by Medicaid eligibility status by adding Medicaid by race/ethnicity interactions to the above model, pooling over coverage type.

We calculated average within-plan disparities and plan-specific disparities for the 2 PD measures using a mixed-effect model. The fixed effects were 3 race/ethnicity indicators (Black, Hispanic, and API) and the case-mix adjustors listed above; the random effects were for contract and 3 additional random slope effects for contract by race/ethnicity (Black, Hispanic, and API) that allow disparities to vary across contracts. We calculated adjusted, shrunken, within-plan estimates of racial/ethnic disparities, averaged them across the 2 PD experience measures, and classified plans into largest (top decile), smallest (bottom decile), or moderate disparity categories.

All analyses employed person-level poststratification weights^{25,26} that account for sample design and nonresponse by matching weighted sample and enrolled populations in each contract by county combination on sex, age, race/ethnicity, Medicaid eligibility/low-income subsidy enrollment status, Special Needs Plan enrollment, and zip-code level distributions of income, education, and race/ethnicity.

RESULTS

Table 1 shows individual characteristics overall and by racial/ethnic group. Non-Hispanic White beneficiaries are least likely and Hispanics the most likely to enroll in MA plans (vs. PDPs). Approximately 45% of racial/ethnic minorities but only 12% of non-Hispanic Whites are Medicaid eligible (21% of all beneficiaries in PDPs and 9% of those in MA-PDs). White beneficiaries are older and in better health than Hispanic, Black, and API beneficiaries, and have educational attainment levels higher than Hispanic and Black beneficiaries but lower than API beneficiaries.

Table 2 shows that Hispanics, Blacks, and API report significantly greater difficulty getting needed drugs than White beneficiaries, with adjusted disparities of -8 points for APIs, -6 points for Hispanics, and -4 points for Blacks (P < 0.001 for each vs. non-Hispanic Whites). Similarly, all 3 groups also report significantly greater difficulty than non-Hispanic Whites with getting information about their PD coverage. Disparities are much larger for Spanish-preferring than English-preferring Hispanic beneficiaries on getting needed drugs.

Disparities for getting needed drugs are 1.3 (Black) and 2.7 (API) contract-level SDs, and are 3.6 and 1.4 contract-level SDs for Spanish-preferring and English-preferring Hispanic beneficiaries, respectively. The magnitude of disparities on the getting needed information composite is lower but still striking, ranging from 0.9 to 2.3 contract-level SDs. Thus differences in Part D experiences by race/ethnicity are as large as the overall differences in experience between average plans and top decile plans.

We see significant disparities by race/ethnicity in both MA-PDs and stand-alone PDPs for each of the 2 composites, except that the disparity for Spanish-preferring MA-PD Hispanics is not statistically significant for getting needed

TABLE 2. Means and Disparities on Prescription Drug Measures Overall and by Coverage Type

	Pooled MA-PD	¶ and PDP#	MA-PD¶	PDP [#]
	Adjusted Mean Score (0–100 Possible Range)	Adjusted Difference From White [†]	Adjusted Difference From White [†]	Adjusted Difference From White [†]
Getting needed drugs				
Hispanic [‡]	84.8	-5.6***	-4.1***	-7.1***
Énglish-preferring	86.4	-4.0***	-3.1***	-5.3***
Spanish-preferring	80.4	-10.0***	-8.8***	-10.7***
Black [§]	86.6	-3.8***	-2.9***	-4.7***
Asian or Pacific Islander	82.7	-7.7***	-5.7***	-8.9***
White [†] (reference)	90.4	_	_	_
Getting information about drugs				
Hispanic [‡]	76.9	-4.5***	-2.4**	-6.1***
English-preferring	77.2	-4.2***	-3.1***	-5.4***
Spanish-preferring	75.9	-5.5**	1.3	-7.6**
Black§	78.1	-3.3***	-6.2***	-2.6**
Asian or Pacific Islander	72.8	-8.6***	-8.7***	-8.6***
White [†] (reference)	81.4	_	_	_

^{**}P<0.01; ***P<0.001.

information. In 8 of 10 cases, the disparity estimates are larger in stand-alone PDPs than in MA-PD.

Disparities by Medicaid eligibility appear in Table 3. Although disparities relative to Medicaid-ineligible Whites are similar for lower and higher income Blacks, they are approximately twice as large for lower income than

higher income Hispanic and API beneficiaries (P<0.001 for differences in disparities by Medicaid eligibility). For Whites, Medicaid eligibility is associated with similar or better experiences.

Next we turn to results on the degree to which these disparities exist within plans, as opposed to between plans,

TABLE 3. Means and Disparities on Prescription Drug Measures by Medicaid Eligibility

	Gett	ing Needed Drugs	Getting In	formation About Drugs
	Adjusted Mean Score (0–100)	Adjusted Difference From Medicaid-Ineligible White [†]	Adjusted Mean Score (0–100)	Adjusted Difference From Medicaid-Ineligible White [†]
Higher income: ineligible for Medica	aid			
Hispanic [‡]	86.3	-4.1***	78.5	-2.5***
Black [§]	86.7	-3.7***	77.4	-3.7***
Asian or Pacific Islander	84.7	-5.6***	75.8	-5.3***
White [†]	90.3	Reference	81.1	Reference
Low income: Medicaid eligible				
Hispanic [‡]	82.6	-7.8 ** *	75.8	-5.2***
Black [§]	86.4	-3.9***	80.2	-0.8
Asian or Pacific Islander	79.8	-10.6***	70.7	-10.4***
White [†]	90.8	0.5	83.7	2.6***
	Coefficient	P	Coefficient	P
Regression model estimates for Med	icaid eligible indicator			
Medicaid-eligible main effect	0.45		2.60	***
Medicaid eligible by Hispanic [‡] interaction	-4.14	***	-5.28	**
Medicaid eligible by Black [§] interaction	-0.73		0.26	
Medicaid eligible by Asian or Pacific Islander interaction	-5.37	***	-7.70	**

^{**}P < 0.01; ***P < 0.001.

non-Hispanic White.

[‡]Hispanic of any race.

[§]non-Hispanic Black.

non-Hispanic Asian or Pacific Islander.

Medicare Advantage-prescription drug plan.

^{*}Stand-alone prescription drug plan.

[†]non-Hispanic White.

[‡]Hispanic of any race.

[§]non-Hispanic Black.

non-Hispanic Asian or Pacific Islander.

TABLE 4. Differences in Plan Characteristics by Size	Plan Characteris	tics by Size of F	of Plan Disparity						
		Hispanic [†]			Black [‡]		Asia	Asian or Pacific Islander [§]	ıder§
Plans With	Smallest Disparity [∥]	Moderate Disparity	Largest Disparity	Smallest Disparity	Moderate Disparity	Largest Disparity	Smallest Disparity	Moderate Disparity	Largest Disparity
Plan characteristics Range of shrunken	-3.9 to -0.7	-5.1 to -3.9	-9.8 to -5.1	-3.4 to +0.6	-4.6 to -3.4	-7.2 to -4.6	-7.3 to -2.7	-10.2 to -7.5	-20.0 to -10.2
Witnin-pian disparities Average within-plan	-3.2	-4.5	-6.1	-2.5	-4.0	-5.4	-6.0	-8.8	-12.3
disparity % of plans that are MA-PDs (%)	*02	98	**29	52***	88	63 ***	**29	98	64***
Enrolled hereficiary characteristics (%) Proportion of all beneficiaries in plans in	istics (%) 16	39	45	43	23	34	34	50	17
this disparity category Proportion of the specific	21	40	39	48	20	33	84	35	16
minority group beneficiaries in plans in this disparity category									
Proportion of all beneficiaries in plans in this disparity category in each census region (%)	in plans in this disp	parity category in e	each census region	(%)	ć	***************************************	7	?	Ç
Midwest	0 * 	22 22	17	£ 25	21	12	13	2.5	30 19
South	38	30	29	36	30	29	23	32	32
West	31	26	20	**	29	20	47**	24	19
Average beneficiary proportions across plans (%)	ns across plans (%)								
Hispanic ⁷	15**	∞ ;	17**		10	10	11	6	6
Black*	7	10	13	12	6,	15*	_ ;;;;	10	13
API	S.	m i	S	m i	4	m i	*** ***	m i	9
Spanish preferring	ر د	7	* *	5	က	m ;	4	ကျ	က
Medicaid eligible	16	20	34*	17	22	23	17	21	26
Medicaid eligible among	26	26	45**	29	29	35	21	23	33
minority group or interest									
Less than high school	23	24	33***	24	24	27	20	25	27
education Fair or poor health	23	23	30***	26	24	26	23	24	27

 $^*P < 0.05; \ ^**P < 0.01; ^{***}P < 0.001$ versus moderate disparity.

[†]Hispanic of any race.

[†]finon-Hispanic Black.

[†]finon-Hispanic Asian or Pacific Islander.

[†]finon-Hispani

and the degree to which the within-plan disparities vary by plan. Average within-plan disparities for Hispanic beneficiaries are 87%–90% the size of the overall disparities for this group (results not shown). Thus enrollment of Hispanic seniors in lower quality plans explains about 10% of overall disparities. Average within-plan disparities for Black beneficiaries are 3%–26% larger than the overall disparities; similarly, within-plan disparities for API beneficiaries average 9% larger than overall disparities. Thus Black and API beneficiaries are enrolled in plans with somewhat higher than average quality, partly compensating for larger average within-plan disparities.

Table 4 illustrates the characteristics of plans with the smallest and largest disparities (top and bottom decile of disparities) compared with plans with moderate disparities (8 middle deciles). For Hispanics, the plans with the largest disparities have a higher proportion of beneficiaries who are Medicaid eligible, in fair or poor health, and have no high school degree. Larger-disparity plans are more likely to serve beneficiaries primarily in the northeast, whereas plans with the smallest API disparities tend to primarily serve beneficiaries in the west. For all 3 minority groups the smallest disparity plans are especially likely to enroll beneficiaries from the racial/ethnic group for whom the disparity is smallest, a pattern that is strongest for API.

DISCUSSION

Hispanic, Black, and API beneficiaries reported greater difficulties obtaining information regarding coverage and obtaining needed PDs by their Medicare Part D coverage (MA-PD and PDPs) than white beneficiaries with the greatest disparities observed for API beneficiaries and Spanish-preferring Hispanic beneficiaries. Generally, smaller disparities in MA-PD than in PDPs are consistent with the transition to MA-PD being less challenging for those previously enrolled in MA than that to PDPs for those with FFS Medicare. Larger disparities for low-income API and Hispanic beneficiaries (but not for lower-income Blacks) suggest that economic, language, and cultural issues may be important in API and Hispanic PD disparities.

Similarly, we find that plans with the largest disparities for Hispanics tend to have beneficiaries lower in income and education. Although the highest disparity plans for each minority group serve substantial proportions of minority beneficiaries with PD coverage, minority beneficiaries disproportionately enroll in plans with smaller or no disparities.

The magnitude of the observed racial/ethnic disparities in getting information and needed care about medicines is substantial, and generally larger than what has been seen for other aspects of Medicare or for the CAHPS Hospital Survey. Similar to a study of racial/ethnic disparities in clinical quality measures in MA plans but unlike some other previous CAHPS studies of hospitals and Medicare plans, we find that virtually all differences occur within plans.

Possible limitations to this study include the issues of potentially differing expectations and scale use by racial/ethnic group. Restricting our comparisons to CAHPS report composites rather than global ratings is likely to have limited these

concerns, given recent experimental evidence of similar use of CAHPS composites by Blacks, Whites, and Hispanics.²⁷ As we have excluded responses from proxies, our results apply directly only to beneficiaries able to complete the survey independently; disparities may be larger or smaller among those requiring assistance. As with all surveys, nonresponse bias may have influenced the observed findings. Nevertheless, research regarding CAHPS surveys has found little evidence of nonresponse bias after case-mix adjustment.^{28–30}

These results suggest that quality improvement efforts are needed to reduce racial/ethnic disparities in beneficiary experience with new Part D PD coverage, especially for lowincome API and Hispanic beneficiaries and those with preferred languages other than English. Cultural, health literacy, and language barriers in navigating the new and complex Medicare's Part D program may partially explain the observed disparities. Substantial variation in disparities across plans suggests that plans may differ in the extent to which they are successful in addressing barriers that racial/ethnic/ linguistic minorities may have in making best use of Part D coverage. Cultural competency training of providers and customer service agents, access to interpreter services, and translation of materials into non-English languages are some of the strategies that can be used to improve the experiences of vulnerable beneficiaries. The fact that disparities disappear in some plans suggests that within-plan disparities in Part D experiences are not inevitable, and there may be best practices that reduce or eliminate disparities in Part D experiences that can be conveyed to other plans. CMS should monitor and alert contracts with large disparities to their need for improvement. "Drill-down" public reporting of contract-level scores by race/ethnicity, as mandated by the Medicare Improvements for Patients and Providers Act of 2008, may also be helpful to beneficiaries and their advocates.

Finally, different disease distributions across racial/ethnic groups may make it relatively more difficult for minority beneficiaries to find a PD formulary that best matches health needs. Further research is needed to determine the mechanisms causing the disparities we observe in almost all MA-PD and stand-alone PDP contracts on beneficiary reported experiences. Such research can guide policy or contract efforts to better address the needs of Hispanic, Black, and API Medicare beneficiaries regarding prescription medicines.

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REFERENCES

- Agency for Healthcare Research and Quality. National Healthcare Disparities Report. Rockvillle, MD: Agency for Healthcare Research and Quality; 2010.
- Institute of Medicine. Unequal Treatment: Confronting Racial and Ethnic Disparities in Health Care. Washington, D.C.: The National Academies; 2002.

- Morales LS, Elliott MN, Weech-Maldonado R, et al. Differences in CAHPS adult survey reports and ratings by race and ethnicity: an analysis of the National CAHPS benchmarking data 1.0. Health Serv Res. 2001;36:595–617.
- 4. Weech-Maldonado R, Morales LS, Elliott M, et al. Race/ethnicity, language, and patients' assessments of care in Medicaid managed care. *Health Serv Res.* 2003;38:789–808.
- Shi L. Vulnerable populations and health insurance. Med Care Res Rev. 2000;57:110–134.
- Trivedi AN, Zaslavsky AM, Schneider EC, et al. Relationship between quality of care and racial disparities in Medicare health plans. *JAMA*. 2006;296:1998–2004.
- Goldstein E, Elliott MN, Lehrman WG, et al. Racial/ethnic differences in patients' perceptions of inpatient care using the HCAHPS survey. *Med Care Res Rev.* 2010;67:74–92.
- Weech-Maldonado R, Elliott MN, Morales LS, et al. Health plan effects on patient assessments of Medicaid managed care among racial/ethnic minorities. J Gen Intern Med. 2004;19:136–145.
- Heller A, Elliott MN, Haviland AM, et al. Patient activation status as a predictor of patient experience among Medicare beneficiaries. *Med Care*. 2009;47:850–857.
- Martin LT, Ruder T, Escarce JJ, et al. Developing predictive models of health literacy. J Gen Intern Med. 2009;24:1211–1216.
- 11. Gold M. Medicare Issues Brief: Medicare Advantage in 2008. Menlo Park, CA: Henry J. Kaiser Family Foundation; 2008.
- Gold M, Jacobson G, Darnico A, et al. Medicare Advantage Enrollment Market Update. Menlo Park, CA: Kaiser Family Foundation; 2011.
- Hoadley J, Summer L, Hargrave E, et al. Analysis of Medicare Prescription Drug Plans in 2011 and Key Trends Since 2006. Menlo Park, CA: Kaiser Family Foundation; 2011.
- Cubanski J, Neuman P. Status report on Medicare Part D enrollment in 2006: analysis of plan-specific market share and coverage. *Health Aff* (Millwood). 2007;26:w1–w12.
- Summer L, Hoadley J, Hargrave E. The Medicare Part D Low-Income Subsidy Program: Experience to Date and Policy Issues for Consideration. Menlo Park, CA: Kaiser Family Foundation; 2010.
- Afendulis CC, He Y, Zaslavsky AM, et al. The impact of Medicare Part D on hospitalization rates. *Health Serv Res*. 2011;46:1022–1038.

- McWilliams JM, Zaslavsky AM, Huskamp HA. Implementation of Medicare Part D and nondrug medical spending for elderly adults with limited prior drug coverage. *JAMA*. 2011;306:402–409.
- 18. Thaler RH, Sunstein CR. Nudge: Improving Decisions About Health, Wealth, and Happiness. New York: Penguin Books; 2009.
- Goldman DP, Smith JP. Can patient self-management help explain the SES health gradient? P Natl Acad Sci USA. 2002;99:10929–10934.
- Elliott MN, Haviland AM, Dembosky J, et al. Are there differences in the Medicare experiences of beneficiaries in Puerto Rico compared to those in the U.S. mainland? *Med Care*. 2012;50:243–248.
- Weech-Maldonado R, Elliott MN, Oluwole A, et al. Survey response style and differential use of CAHPS rating scales by Hispanics. *Med Care*. 2008;46:963–968.
- Elliott MN, Haviland AM, Kanouse DE, et al. Adjusting for subgroup differences in extreme response tendency in ratings of health care: impact on disparity estimates. *Health Serv Res.* 2009;44:542–561.
- Martino SC, Elliott MN, Cleary PD, et al. Psychometric properties of an instrument to assess Medicare beneficiaries' prescription drug plan experiences. *Health Care Finance Rev.* 2009;30:41–53.
- Farley DO, Elliott MN, Haviland AM, et al. Understanding variations in Medicare Consumer Assessment of Health Care Providers and Systems scores: California as an example. *Health Serv Res.* 2011;46:1646–1662.
- Purcell NJ, Kish L. Postcensal estimates for local areas (or domains). Int Stat Rev. 1980;48:3–18.
- Deming WE, Stephan FF. On a least squares adjustment of a sampled frequency table when the expected marginal totals are known. *Ann Math Stat.* 1940;11:427–444.
- Weinick RM, Elliott MN, Volandes AE, et al. Using standardized encounters to understand reported racial/ethnic disparities in patient experiences with care. *Health Serv Res.* 2011;46:491–509.
- Klein DJ, Elliott MN, Haviland AM, et al. Understanding Nonresponse to the 2007 Medicare CAHPS Survey. Gerontologist. 2011;51:843–855.
- Elliott MN, Zaslavsky AM, Goldstein E, et al. Effects of survey mode, patient mix, and nonresponse on CAHPS hospital survey scores. *Health Serv Res*. 2009;44:501–518.
- Elliott MN, Swartz R, Adams J, et al. Case-mix adjustment of the National CAHPS benchmarking data 1.0: a violation of model assumptions? *Health Serv Res.* 2001;36:555–573.