Sources of Drug Coverage among Medicare Beneficiaries with ESRD

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ABSTRACT

Despite extensive use of prescription medications in ESRD, relatively little is known about the participation of Medicare ESRD beneficiaries in the Part D program. Here, we quantitated the sources of drug coverage among ESRD beneficiaries and explored the Part D plan preferences of ESRD beneficiaries with regard to deductibles, coverage gaps, and monthly premiums. We obtained data on beneficiary sources of creditable coverage, characteristics of Part D plans, demographics, and residence from the Centers for Medicare and Medicaid Chronic Condition Data Warehouse and identified beneficiaries with ESRD from the US Renal Data System. We found that a substantial proportion (17.0%) of ESRD beneficiaries lacked a known source of creditable drug coverage in 2007 and 64.3% were enrolled in Part D. Of those enrolled, 72% received the Medicare Part D low-income subsidy. ESRD beneficiaries who enrolled in standalone Part D plans without the assistance of the low-income subsidy tended to prefer more comprehensive coverage options. In conclusion, more outreach is needed to ensure that beneficiaries who lack coverage obtain the coverage they need and that ESRD beneficiaries join the best plans for managing their disease and accompanying comorbid conditions.


The most recent published estimates from the US Renal Data System (USRDS) indicate that as of December 31, 2007, there were 527,746 individuals with ESRD in the United States, of whom 439,765 (83.3%) were covered by the Medicare program.1 ESRD is a serious condition with profound effects on quality of life, other chronic conditions, and subsequent morbidity and mortality. Concomitant comorbid conditions are common and include congestive heart failure, ischemic heart disease, anemia, dyslipidemia, and bone and mineral metabolism disorders. The average expected remaining lifetime for an ESRD dialysis patient is 5.9 years, compared with 16.4 years for kidney transplant recipients and 25.2 years for the general population.2 Approximately 20% of ESRD patients die within the first year of diagnosis.1 ESRD also has important financial consequences for the Medicare program and for individual patients. In 2007, ESRD beneficiaries accounted for $24 billion (approximately 6%) of total Medicare spending, although they comprise <1% of the total beneficiary population.1 Annual out-of-pocket spending for drugs among Medicare beneficiaries with ESRD has been estimated to be nearly twice that of the general beneficiary population.3

Managing the clinical consequences of ESRD requires extensive medication use. ESRD patients undergoing dialysis receive prescriptions for, on average, between 6 and 12 medications at any one time.4–6 Starting in 2006, all Medicare beneficiaries became eligible to enroll in the Medicare Part D program. The Part D program differs significantly from the traditional Medicare program in that it

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relies on numerous private companies that offer plans with varying cost-sharing structures and provisions to provide benefits. Under the standard benefit option in 2007, beneficiaries paid an initial deductible of $265, faced a gap in coverage after incurring $2400 in drug costs, and gained catastrophic coverage after incurring a total of $5451 in drug costs. In addition to the standard benefit, companies can offer basic alternative and actuarily equivalent plan options that modify the various cost-sharing provisions while maintaining the same overall projected plan costs. Companies can also offer enhanced plan options that waive deductibles, offer coverage in the coverage gap, provide wider formularies, and offer coverage for drugs not covered by Part D in exchange for higher beneficiary premiums. Medicare Advantage plans can also offer drug coverage under any of these coverage alternatives in conjunction with their managed care plan offerings.

The Part D program also differs from traditional Medicare in that participation is completely voluntary. Beneficiaries who have existing sources of prescription drug insurance or who prefer to forgo coverage are free to do so. However, to minimize the risk of beneficiaries strategically opting in and out of Part D based on current prescription drug needs, the program includes a late enrollment penalty for beneficiaries who cannot demonstrate that they have retained a source of drug coverage at least as good as that offered through Part D (creditable coverage).

Enrollment in a Medicare Part D plan has the potential to generate significant cost savings and reduce cost-related nonadherence for ESRD beneficiaries, because for the first time Medicare began to cover many of the medications used for treating ESRD. Furthermore, the Centers for Medicare and Medicaid Services (CMS) is implementing a prospective bundled payment system for ESRD treatment that is expected to start covering all oral ESRD medications by 2014. Despite the importance of prescription medications and prescription drug coverage for Medicare beneficiaries with ESRD, relatively little is known about how these patients currently obtain drug coverage, whether sources of coverage differ among patients with different demographic characteristics, or what features of Part D plans are important. The objectives of our research therefore were to describe the sources of drug coverage in the ESRD beneficiary population, to examine differences in sources of coverage by demographics, and to explore beneficiary Part D plan preferences regarding deductibles, coverage gaps, and monthly premiums.

RESULTS

By the end of 2007, 17.0% of the 86,569 (estimated 432,845) ESRD beneficiaries identified in our data had no known source of creditable drug coverage, 18.3% were enrolled in a Part D plan without the low-income subsidy (LIS), 46% were enrolled in a Part D plan with the LIS, 9.0% obtained retiree drug coverage from a former employer, and 9.7% received coverage from another creditable source. Corresponding percentages in the general non-ESRD population were 15.4%, 34.0%, 21.7%, 15.9%, and 13.0%, respectively (Table 1, all differences, \(P<0.05\)). Of beneficiaries enrolled in Part D plans, 72% of ESRD and 39% of non-ESRD beneficiaries received the LIS.

Rates of no known drug coverage were higher among ESRD beneficiaries who were aged <65 years, white, or American Indian/Alaska Native, and were lower for ESRD beneficiaries who were aged >65 years, black, or Hispanic. Differences in the rates of no known drug coverage between the ESRD and non-ESRD populations also varied by age and race/ethnicity. Younger ESRD beneficiaries were more likely to lack coverage and older beneficiaries were less likely, compared with similar age groups in the non-ESRD population. Rates of no known drug coverage were higher for ESRD beneficiaries of white, Asian/Pacific Islander, and other/unknown race/ethnicity, and lower for blacks and American Indians/Alaska Natives, compared with non-ESRD beneficiaries of the same race/ethnicity.

The proportions of ESRD beneficiaries enrolled in Part D plans with the LIS were highest among those aged <65 years and among minorities. Differences in the percentage of beneficiaries with Part D coverage by LIS status in the ESRD and non-ESRD populations also varied by age and race. Younger ESRD beneficiaries were less likely to receive the LIS and older beneficiaries more likely compared with non-ESRD beneficiaries of similar age. ESRD beneficiaries in all race/ethnicity groups were more likely to receive the LIS than similar beneficiaries in the non-ESRD population. Patterns of drug coverage by ESRD Network are presented in Supplemental Table 1.

Compared with non-ESRD beneficiaries who enrolled in standalone Part D plans without the LIS (\(n=1,756,735\); estimated 8,783,675), those with ESRD (\(n=10,910\); estimated 54,500) seemed to show a greater preference for plans with no initial deductibles (70.8% versus 68.9%, \(P<0.05\)) and for plans offering some kind of drug coverage in the coverage gap (38.0% versus 33.7%, \(P<0.05\); Table 2). ESRD beneficiaries who enrolled in standalone Part D plans without the LIS were also more likely to enroll in plans with higher monthly premiums. For example, 22.6% of ESRD beneficiaries enrolled in plans with premiums in the upper quartile of the overall distribution of available plan premiums, compared with only 11.9% in the non-ESRD population (\(P<0.05\)). The observed preferences among ESRD beneficiaries enrolled in standalone Part D plans for plans without gaps in coverage and with higher premiums seemed to be stronger among whites than among minority racial/ethnic groups. Patterns of plan characteristics by ESRD network are presented in Supplemental Table 2.

DISCUSSION

In this study, we found that in 2007 a substantial proportion (17.0%) of Medicare beneficiaries with ESRD lacked a known source of creditable drug coverage, a rate similar to, although...
All 432,845 43,884,880 17.0 15.4 a,b 18.3 34.0 a,b 46.0 21.7 a,b 9.0 15.9 a,b 9.7 13.0 a,b

J Am Soc Nephrol

tests (coverage among ESRD bene

results by age, however, showed much lower rates of no known

general Medicare population to enroll in a drug plan. Stratifying

ulation. This result was somewhat surprising, because one would

slightly higher than, the rate observed in the non-ESRD pop

ulation. This result was somewhat surprising, because one would

ly higher than, the rate observed in the non-ESRD pop-

Signiﬁcantly affecting morbidity

on coverage among ESRD beneficiaries aged ≥65 years and much

 Higher rates of no known coverage among younger ESRD beneficiaries. Higher rates of no known coverage among younger beneficiaries may be
due to coverage from a source not identiﬁed in the CMS administra

tive data, such as private coverage from an employer, parent, or spouse.

We also found that a higher percentage of white and

American Indian/Alaska Native ESRD beneﬁciaries seemed to lack a known source of creditable coverage compared with non-

American Indian/Alaska Native minority populations. Some of this differential could possibly be driven by higher rates of

unobserved sources of coverage among more afﬂuent whites, by Indian Health Service coverage not identiﬁed in the CMS administra

tive data for American Indians/Alaska Natives, and by higher rates of LIS eligibility and Part D auto-enrollment among disadvantaged minorities. More research is needed to understand the inter-relationships between race, ethnicity, socioeconomic status, and prescription drug coverage among ESRD beneﬁciaries.

Lack of drug coverage has consistently been shown to be a

key risk factor for cost-related nonadherence in a variety of

studies in the general population and among Medicare beneﬁciaries.7–12 Failure to take needed medications can result in multiple health problems, signiﬁcantly affecting morbidity and survival. An observational study of 31,455 elderly survivors of acute myocardial infarction showed graded associations be-

between decreasing levels of adherence to statins or β blockers and increased mortality.13 This is concerning because other investi-
gators have shown that long-term medication adherence to β blockers and angiotensin converting enzyme inhibitors or angiotensin II receptor blockers was lower after acute myocardial infarction in elderly patients with CKD than in those with no kidney dysfunction.14 Nonadherence to phosphate binders has also been shown to be a common problem in ESRD patients.15

Researchers and health professionals have long been con-
cerned about how the high cost of medications can inﬂuence ESRD patient adherence to medication therapies. Estimates of cost-related nonadherence among ESRD beneﬁciaries before implementation of the Medicare Part D program ranged between 3% and 80%, owing to large differences in how adherence is deﬁned in the different studies.6 In recent work, we estimated that 30.8% of Part D–enrolled ESRD beneﬁciaries reported cost-related nonadherence, nearly twice the rate reported in the general beneﬁciary population.16 Given the importance of medication therapy to the management of ESRD and associated comorbid conditions, it is important that CMS and other public health advocates work to ensure that these beneﬁciaries enroll in and

<table>
<thead>
<tr>
<th>Characteristic</th>
<th>Estimated Population, n</th>
<th>No Known Coverage</th>
<th>Part D (No LIS)</th>
<th>Part D (LIS)</th>
<th>Former Employer</th>
<th>Other Creditable</th>
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<tr>
<td></td>
<td>ESRD</td>
<td>Non-ESRD</td>
<td>ESRD</td>
<td>Non-ESRD</td>
<td>ESRD</td>
<td>Non-ESRD</td>
</tr>
<tr>
<td>All</td>
<td>432,845</td>
<td>43,884,880</td>
<td>17.0</td>
<td>15.4 a,b</td>
<td>18.3</td>
<td>34.0 a,b</td>
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<td>Age (yr)</td>
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<td></td>
<td></td>
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<td></td>
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<tr>
<td>20–44</td>
<td>67,025</td>
<td>1,731,315</td>
<td>22.3</td>
<td>14.5 a,b</td>
<td>5.8</td>
<td>6.4 a</td>
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<td>45–64</td>
<td>178,230</td>
<td>5,537,750</td>
<td>24.2</td>
<td>17.8 a,b</td>
<td>12.0</td>
<td>17.9 a,b</td>
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<td>65–74</td>
<td>104,125</td>
<td>19,051,650</td>
<td>9.1 c</td>
<td>16.2 a,b</td>
<td>27.1 c</td>
<td>37.6 a,b</td>
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<td>≥75</td>
<td>83,465</td>
<td>17,564,165</td>
<td>7.2 c</td>
<td>13.8 a,b</td>
<td>30.5 c</td>
<td>38.0 a,b</td>
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<tr>
<td>men</td>
<td>243,855</td>
<td>19,439,940</td>
<td>17.3</td>
<td>14.4 a,b</td>
<td>19.1</td>
<td>31.5 a,b</td>
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<tr>
<td>women</td>
<td>188,990</td>
<td>24,444,940</td>
<td>16.7</td>
<td>16.1 a</td>
<td>17.2</td>
<td>36.0 a,b</td>
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<td>200,975</td>
<td>34,373,450</td>
<td>18.5 c</td>
<td>15.0 a,b</td>
<td>25.0 c</td>
<td>36.7 a,b</td>
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<tr>
<td>black</td>
<td>136,735</td>
<td>4,183,725</td>
<td>12.0 a,b</td>
<td>13.4 a,b</td>
<td>12.0 c</td>
<td>19.6 a,b</td>
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<td>Hispanic</td>
<td>59,690</td>
<td>3,308,160</td>
<td>16.2 c</td>
<td>13.2 a,b</td>
<td>31.0 a,b</td>
<td>62.3 a,b</td>
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<tr>
<td>Asian/PI</td>
<td>15,095</td>
<td>1,023,090</td>
<td>17.1 c</td>
<td>12.6 a,b</td>
<td>17.6 c</td>
<td>26.5 a,b</td>
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<tr>
<td>Al/AN</td>
<td>15,515</td>
<td>827,715</td>
<td>44.5 c</td>
<td>39.9 a,b</td>
<td>9.5 c</td>
<td>20.5 a,b</td>
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</table>

Data are derived from the Centers for Medicare and Medicaid CCW 20% sample. Source of coverage, Medicare eligibility, and ESRD status were ascertained in December 2007. Each observation is weighted by 5 to give population estimates. Unless otherwise indicated, values are percentages. AI/AN, American Indian/Alaska Native; LIS, low-income subsidy; PI, Paciﬁc Islander.

a Differences between estimate for ESRD population and non-ESRD population signiﬁcant at the P<0.05 conﬁdence level.

b Differences between estimate for ESRD population and non-ESRD population signiﬁcant at the P<0.05 level after Bonferroni correction.

Signiﬁcant deviations from the expected value for the population in the distributions of beneﬁciary characteristics within coverage groups based on chi-squared tests (P<0.05).
Table 2. Medicare ESRD Beneficiary Enrollment by Part D Plan Characteristics

<table>
<thead>
<tr>
<th>Beneficiary Characteristic</th>
<th>Estimated Population, n</th>
<th>No Deductible</th>
<th>Gap Coverage</th>
<th>Part D Plan Characteristics</th>
<th>Premium Quartilea</th>
</tr>
</thead>
<tbody>
<tr>
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<td>ESRD</td>
<td>Non-ESRD</td>
<td>ESRD</td>
<td>Non-ESRD</td>
<td>ESRD</td>
</tr>
<tr>
<td>All</td>
<td>54,500</td>
<td>8,783,675</td>
<td>70.8</td>
<td>68.9bc</td>
<td>38.0</td>
</tr>
<tr>
<td>Age (yr)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>&lt;20d</td>
<td>–</td>
<td>–</td>
<td>–</td>
<td>–</td>
<td>–</td>
</tr>
<tr>
<td>20–44</td>
<td>3340</td>
<td>68,975</td>
<td>63.5a</td>
<td>62.1</td>
<td>32.9a</td>
</tr>
<tr>
<td>45–64</td>
<td>15,850</td>
<td>531,995</td>
<td>71.6a</td>
<td>72.0</td>
<td>40.6a</td>
</tr>
<tr>
<td>65–74</td>
<td>19,040</td>
<td>4,150,045</td>
<td>71.3a</td>
<td>70.0</td>
<td>40.3a</td>
</tr>
<tr>
<td>≥75</td>
<td>16,270</td>
<td>4,032,660</td>
<td>71.1a</td>
<td>67.4bc</td>
<td>33.9a</td>
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<tr>
<td>Sex</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>men</td>
<td>31,935</td>
<td>3,415,420</td>
<td>70.9a</td>
<td>68.5bc</td>
<td>37.7</td>
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<tr>
<td>women</td>
<td>22,565</td>
<td>5,368,255</td>
<td>70.7a</td>
<td>69.2b</td>
<td>38.5</td>
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<td>Race/ethnicity</td>
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<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>white</td>
<td>36,635</td>
<td>7,959,365</td>
<td>72.6a</td>
<td>69.1bc</td>
<td>40.3a</td>
</tr>
<tr>
<td>black</td>
<td>11,570</td>
<td>370,060</td>
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<td>67.8</td>
<td>31.8a</td>
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<td>Hispanic</td>
<td>3,830</td>
<td>240,985</td>
<td>69.6a</td>
<td>70.0</td>
<td>38.4a</td>
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<td>Asian/PI</td>
<td>1,335</td>
<td>108,295</td>
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<td>AI/AN</td>
<td>220</td>
<td>16,310</td>
<td>56.8a</td>
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<tr>
<td>other/unknown</td>
<td>910</td>
<td>88,660</td>
<td>67.0a</td>
<td>70.0</td>
<td>42.1a</td>
</tr>
</tbody>
</table>

Data are derived from the CMS CCW 20% sample. Source of coverage, Medicare eligibility, and ESRD status were ascertained in December 2007. Each observation is weighted by 5 to give population estimates. Unless otherwise indicated, values are percentages. Analysis excluded beneficiaries receiving the LIS or in Medicare Advantage Prescription Drug plans. AI/AN, American Indian/Alaska Native; PI, Pacific Islander.

aPlans were categorized into quartiles by monthly premium level, based on the national distribution of available plan premiums (first quartile, $0–$27.09; second quartile, $27.10–$31.89; third quartile, $31.90–$42.59; fourth quartile, $42.60–$135.70).

b Differences between estimate for ESRD population and non-ESRD population significant at the P<0.05 confidence level.

c Differences between estimate for ESRD population and non-ESRD population significant at the P<0.05 level after Bonferroni correction.

d Results redacted due to CMS sample size reporting restrictions.

e Significant deviations from the expected value for the population in the distributions of beneficiary characteristics within plan characteristic categories based on chi-squared tests (P<0.05).
appropriately use the prescription drug coverage that is available to them.

We also found that a considerable number of ESRD beneficiaries participated in Part D coverage in conjunction with the LIS. The largest difference in the distribution of drug coverage between ESRD beneficiaries and the general non-ESRD Medicare population was in relation to the LIS. The ESRD beneficiary Part D participation with LIS was 46.2% versus 21.7% non-ESRD beneficiary participation, resulting in a 24.5% difference. The LIS program benefits ESRD beneficiaries in two key ways. First, under the subsidy, beneficiaries are generally not subject to many of the cost-sharing mechanisms, such as coverage gaps and deductibles, built into Part D plans. Thus, these beneficiaries face relatively fewer cost barriers to obtaining medications. Second, beneficiaries receiving the LIS were automatically enrolled in Part D plans, thus mitigating potential access problems.

Our analysis of ESRD beneficiary plan preferences also yielded important findings related to standalone plans. Among beneficiaries who self-enrolled in standalone Part D plans, more comprehensive and expensive plan offerings seemed to be preferred; beneficiaries were more likely to enroll in plans without coverage gaps and with higher premiums. Much of this preference is likely explained by the nature of ESRD treatment, which requires intensive and consistent medication therapy. Lack of gap coverage has been associated with reductions in medication use and adherence in several studies. Beneficiaries with ESRD may be especially sensitive to coverage gap issues, given the large number of medications required to manage multiple comorbid conditions. ESRD beneficiaries were thus likely self-selecting into plans that facilitated maintaining these therapies. However, the racial and ethnic differences that we observed in relation to these observed preferences were concerning because minority ESRD beneficiaries selected more comprehensive plans less frequently than whites did. Much of this difference is likely driven by socioeconomic factors, which unfortunately were not available in our data. More research is needed to fully understand this potential disparity and the potential implications for hospitalizations and other adverse events.

Although our findings present the most comprehensive description of drug coverage among ESRD beneficiaries that has been reported to date, this analysis is limited in two key ways. First, the administrative data in the Chronic Condition Data Warehouse (CCW) may not have identified all beneficiaries with drug coverage from other creditable sources. CMS data on sources of drug coverage did not include complete information on beneficiaries covered by the Indian Health Service, privately purchased drug plans (such as legacy Medigap policies), or privately sponsored plans. Consequently, these estimates likely overstate the number of beneficiaries with no known source of drug coverage, particularly in younger age cohorts and among American Indians/Alaska Natives, who may be more likely to obtain coverage from an unobservable source. Second, although the CCW contains a wealth of administrative data on beneficiary coverage and utilization, information on beneficiary characteristics beyond simple demographics is extremely limited, making more sophisticated analyses of enrollment and coverage decisions difficult.

Future research should work to address these limitations. One promising avenue for additional inquiry would be the development of additional data linkages between the CCW and other data sources, such as the Consumer Assessment of Health Plans or multiple waves of the Medicare Current Beneficiary Survey. Information from these sources could supplement the administrative data in the CCW with survey reports of beneficiary coverage, characteristics, adherence to therapy, and health outcomes. Lastly, medication coverage differences should be carefully considered in any outcome-related research, because selection bias may play an important role in medication plan use. More comprehensive modeling approaches will be needed to address these biases to limit confounding by indication or misclassification in studies of treatment and outcome effectiveness.

We found that a substantial proportion of ESRD beneficiaries lacked a known source of creditable drug coverage in 2007, that many of the ESRD beneficiaries enrolled in Part D were also receiving the LIS, and that ESRD beneficiaries who self-enrolled in standalone Part D plans tended to prefer more comprehensive coverage options, which may limit their exposure to out-of-pocket costs during the coverage gap. Although the ongoing implementation of the ESRD bundled payment should work to ensure that all ESRD beneficiaries (whether enrolled in the Part D program or not) have access to the medications they need to manage their kidney-related conditions, the full effect of the bundled payment on global medication adherence and health outcomes remains to be seen. CMS and other health advocates should work to monitor the effect of the new payment reforms on ESRD beneficiaries and continue outreach work to ensure that these beneficiaries obtain the coverage they need.

CONCISE METHODS

The CCW is a research data set developed by CMS that compiles information from a variety of CMS administrative data sources. We used the CCW to examine a 20% random sample of all Medicare beneficiaries who were alive and enrolled in the Medicare program in December 2007 (n=8,864,239). We identified beneficiaries with ESRD by linking the ESRD disease registry maintained by the USRDS to the CCW. By joining these two databases at the beneficiary level, we identified 87,184 beneficiaries with ESRD in our 20% sample.

We ascertained beneficiary Part D enrollment, LIS status, and retiree drug coverage from a former employer (as evidenced by the former employer’s eligibility for the retiree drug subsidy) in December 2007 via monthly enrollment and eligibility indicators maintained by CMS. We additionally identified other known sources of creditable drug coverage (Federal Employee Health Benefit Plan, Department of Veterans’ Affairs, Tricare, State Pharmacy Assistance Programs, or current employers) via an indicator in the CCW that aggregates the information that CMS receives from other state and federal agencies on an annual basis. We classified beneficiaries who did not obtain coverage from any of the above sources as having no known creditable coverage. Of note, having
no known source of drug coverage does not translate directly into having no source of coverage; it simply means that CMS has no evidence of other sources of drug coverage in any of the data systems the agency uses to coordinate benefits.

For beneficiaries enrolled in Part D plans, we identified key aspects of plan benefit designs. First, because interruptions in coverage can potentially lead to disruptions in critical drug therapies, we identified plans with features designed to minimize breaks in coverage (no-deductible plans and plans with gap coverage). Second, to understand how much ESRD beneficiaries were paying for their prescription drug coverage under the Part D program, we categorized plans into quartiles by monthly premium level, based on the national distribution of available plan premiums (first quartile, $0–$27.09; second quartile, $27.10–$31.89; third quartile, $31.90–$42.59; fourth quartile, $42.60–$135.70). In our analyses, we examined the following beneficiary demographic characteristics: age (20–44, 45–64, 65–74, and ≥75 years), sex, and race/ethnicity (white, black, Hispanic, Asian/Pacific Islander, American Indian/Alaska Native, and other/unknown).

To describe beneficiary sources of drug coverage, we calculated the percentages of ESRD and non-ESRD Medicare beneficiaries with no known source of creditable coverage who were enrolled in a Part D plan with and without the LIS, who received retiree drug coverage from a known source of creditable coverage who were enrolled in a Part D plan, and who received coverage from one of the other creditable sources. We also calculated similar percentages for each of the coverage groups by the demographic subpopulations described above.

To explore beneficiary Part D plan preferences, we calculated the percentage of beneficiaries self-enrolled in stand-alone Part D plans who chose coverage options with no deductible, with gap coverage, and with premiums in each of the four premium quartiles for the ESRD and the non-ESRD beneficiary populations. LIS beneficiaries (ESRD, n=40,281; non-ESRD, n=1,905,944) were excluded because they were not typically subject to the cost-sharing mechanisms imbedded in Part D plans and they were typically automatically enrolled in a randomly selected basic benefit plan. Beneficiaries enrolled in Medicare Advantage Prescription Drug plans (ESRD, n=4797; non-ESRD, n=1,206,154) were excluded because beneficiaries with existing ESRD are typically not permitted to enroll in Advantage plans and because separating Advantage plan Part D premiums from the larger Advantage plan Part C premiums and government payments is not always possible. We calculated percentages for each benefit feature by the demographic subpopulations described above.

To identify statistically significant differences (P<0.05) in the distribution of drug coverage and in the characteristics of Part D plans between the ESRD and non-ESRD Medicare populations, we performed t tests on the differences in the observed proportions. To account for multiple testing, we applied Bonferroni corrections separately in Table 1 (unadjusted P<0.05/70) and Table 2 (unadjusted P<0.05/78). We used chi-squared test statistics to identify significant differences in the distributions of beneficiary characteristics within the coverage groups and plan characteristics that were examined.

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DISCLOSURES

None.

REFERENCES


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