

RUPRI Center for Rural Health Policy Analysis

Rural Policy Brief

Brief No. 2019-1

MARCH 2019

<http://www.public-health.uiowa.edu/rupri/>

Comparing Rural and Urban Medicare Advantage Beneficiary Characteristics

Abigail Barker, PhD; Lindsey Nienstedt, BA; Leah Kemper, MPH; Timothy McBride, PhD; and Keith Mueller, PhD

Purpose

The Medicare Advantage (MA) program allows Medicare beneficiaries to receive benefits from private plans rather than from traditional fee-for-service (FFS) Medicare. Little is known about the rural and urban differences in the populations that enroll in the MA program, and these differences may be important for setting policy. This brief uses data from the 2012–13¹ Medicare Current Beneficiary Survey (MCBS) to describe these differences, and combined with county-level data on MA issuer participation, this dataset also allows us to assess the degree to which issuers may engage in selective MA market entry on the basis of demographic characteristics.

Key Findings

- Rural and urban MA and FFS populations did not differ much on average by any characteristics reported in the data, including age, self-reported health status, cancer diagnosis, smoking status, Medicaid status, or by other variables assessing frailty and presence of chronic conditions.
- Most measures of access were similar across rural and urban respondents. However, in terms of cost, urban enrollees were less likely to pay an additional premium (beyond Medicare Part A and B) to obtain MA coverage: 42 percent reported doing so in urban places, while 54 percent did so in rural places.
- While rurality on its own was often a significant predictor of lower issuer participation in a county's MA market, the addition of other demographic characteristics did not influence the prediction. In other words, we found no evidence, based upon MCBS data, that issuers exclude rural counties due to other demographics.

Introduction

More than a quarter of Medicare beneficiaries are enrolled in MA, which was created in large part to promote competition among private managed care plans. Much of the rationale for the current MA program is based on the premise that MA plans can provide care of higher quality and lower cost than the traditional Medicare system, and that this improved efficiency of health care delivery will enable more generous benefits at a lower premium.² MA plans operating in many rural areas do not have the same monetary incentives to improve quality as those in many urban areas because payment caps make them ineligible to receive the quality-based bonus payments.³

All MA plans in both urban and rural areas may receive additional payments through a risk-adjustment program to offset expected costs of high-risk enrollees, which may counteract any disincentive to participate in certain rural markets on the basis of any unfavorable demographic characteristics. Although early evidence from the MA precursor (Medicare risk) program suggested



**Rural Health Research
& Policy Centers**

Funded by the Federal Office of Rural Health Policy
www.ruralhealthresearch.org

This project was supported by the Federal Office of Rural Health Policy (FORHP), Health Resources and Services Administration (HRSA), U.S. Department of Health and Human Services (HHS) under grant #U1C RH20419. The information, conclusions and opinions expressed in this policy brief are those of the authors and no endorsement by FORHP, HRSA, HHS, is intended or should be inferred.



RUPRI Center for Rural Health Policy Analysis,
University of Iowa College of Public Health,
Department of Health Management and Policy,
145 Riverside Dr., Iowa City, IA 52242-2007,
(319) 384-3830
<http://www.public-health.uiowa.edu/rupri>
E-mail: cph-rupri-inquiries@uiowa.edu

that favorable selection was a problem,^{4,5} more recent analysis of MA since a new risk adjustment system was implemented in 2004-07 found a reduction in favorable selection overall.⁶ In fact, rural enrollment in MA and other prepaid plans continues to grow, although the rate of rural enrollment growth was smaller than the rate of national enrollment growth.⁷ This pattern suggests that plans offered are desirable or preferred by a portion of rural beneficiaries choosing between an MA plan and remaining in the FFS program. Individual-level data from the 2012-13 MCBS are used here to help assess the rural MA experience.

Methods

Descriptive analysis of the MCBS 2012-13 Access to Care files compares the demographics of rural MA to urban MA enrollees as well as to rural FFS Medicare enrollees, using the MCBS variable on metropolitan status for this delineation. We report similarly on responses to other questions in the MCBS related to access, affordability, and quality. This project also combined the MCBS with the MA service area files for each MA issuer available through the Centers for Medicare & Medicaid Services. The latter were aggregated across issuers in order to measure insurance issuer participation at the county level, allowing us to look for an association between participation and certain demographic characteristics in rural areas using regression analysis. This analysis was possible because the MCBS contains geographic information (county of residence) on all respondents. Therefore, we were able to create for each respondent variables summarizing the number of plans, the number of issuers offering plans, and the number of plans available for zero additional premium (beyond the Part A and B payment) available to each individual.

While the MCBS provided much richer detail on health status of beneficiaries than other administrative data sets, the sampling design (in clusters defined at the county level) created challenges in identifying statistically significant relationships. In particular, it was difficult to model the potential reason that issuers choose not to offer MA coverage in certain rural counties due to the fact that the MCBS contained no observations for some of the counties that might be the most likely to experience this challenge. While about 20 percent of participants lived in rural counties, only about 8 percent of rural counties were sampled. These were sampled to be representative, but nonetheless the rural counties with the smallest populations do have quite limited presence in the data set.

Results

Demographics. The rural and urban MA and FFS populations did not differ much by any characteristics reported in the data. This result included comparisons of rural and urban populations across these characteristics: age, age over 75, self-reported health status, cancer diagnosis, smoking status, and Medicaid status. Other variables assessing frailty, such as questions on difficulty walking or performing personal tasks, and whether the respondent's health limits his or her activities, also showed no statistically significant differences. A calculated variable that

Table 1. Average Number of Chronic Conditions per Beneficiary by Medicare Type and Geographic Residence, 2012-13 MCBS

	MA	FFS
Rural	3.37	3.35
Urban	3.29	3.11

counted the total number of chronic conditions (based upon variables such as diagnosis of diabetes, arthritis, high blood pressure, COPD, a heart condition, high cholesterol, depression, or Alzheimer's/dementia) reported in the MCBS also showed no statistically significant differences across rural and urban MA beneficiaries nor across rural and urban FFS beneficiaries (Table 1).

Access to Care. Very few MA enrollees reported difficulty accessing specialty care. Using a special component of the MCBS that asks detailed questions about beneficiaries' experience with managed care, we found that the only statistically significant difference was the frequency with which urban beneficiaries cited an excessive wait time as a reason the referral process was difficult (Table 2).

More than eight times as many urban beneficiaries (24.63 percent) cited wait times as a reason for difficulty compared to rural beneficiaries (2.86 percent). Other measures showed expected differences—such as provider location not being convenient to rural beneficiaries—but likely due to the MCBS

Table 2. Measures of Access by MA Beneficiaries, 2012-13 MCBS

	Rural	Urban
Had difficulty getting referrals	3.29%	3.63%
Among those <u>with</u> difficulty, reasons cited:		
Plan wouldn't authorize service	42.86%	42.86%
Plan wouldn't approve provider	28.57%	27.59%
Wait was too long	2.86%	24.63%
Provider location not convenient	8.57%	4.43%
Provider hours not convenient	0%	0.99%
Did not like plan-referred doctor(s)	2.86%	5.91%
Other reason	25.71%	22.17%

Note: Statistically significant differences are in bold type.

sample size and complex survey design, these differences were not statistically significant.

In addition, the overall level of satisfaction with MA plans, as measured by a question on whether respondents would recommend their MA plan to family or friends, was statistically similar across rural and urban respondents (93.8 percent of rural and 93.0 percent of urban respondents said that they would recommend their plan).

There was just one key difference in access, and this related to cost. Similar to findings from administrative data that measure availability of plans with zero additional premiums,⁸ we found that urban enrollees are less likely to pay an additional premium (beyond Medicare Part B) to obtain MA coverage: 42 percent report doing so in urban places, while 54 percent do so in rural places. However, across several responses assessing affordability (such as dissatisfaction with medical services for cost reasons, choosing not to see a doctor for cost reasons, and delaying or skipping medications due to cost) there were no significant differences across rural and urban respondents, either in MA or in the traditional FFS program (data not shown).

Issuer Behavior. In order to test whether insurance issuers might be less likely to participate in the MA market in counties with a less healthy, potentially more expensive pool of enrollees, we explored the data testing for a variety of possible relationships. In all cases, we found that while rurality was often a significant predictor of lower issuer participation on its own, the addition of other demographic characteristics did not influence the prediction. In other words, we found no evidence, based upon MCBS data, that issuers exclude rural counties due to demographics or health status. To demonstrate this, we report results of one model that predicts the number of issuers in a county based upon rurality and aggregated demographic characteristics available from MCBS data (Table 3).

Table 3. Number of Issuers Available to MCBS Respondents Based on Their Characteristics

MCBS Beneficiary Characteristics	Average Number of Issuers Available to a Beneficiary With Those Characteristics
Live in an urban county, in good to excellent health, no chronic conditions, non-smoking, non-Medicaid, and age 65	7.05
Live in a rural county	3.38
Are aged 75 and over	7.14
Are in fair to poor health compared to their peers	7.18
Have an average number of chronic conditions*	7.04
Currently smoke	6.89
Are dually enrolled in Medicaid	8.36

*The average is 3.14 chronic conditions. Bold type indicates statistical significance.

The findings indicate that the average number of issuers with plans available to urban MCBS respondents is 7.05, but that for those living in a rural county, the average is reduced to 3.38. Beyond that, other characteristics show only very small effects, and none is statistically significant. The only variable that comes close to reaching significance is Medicaid dual status, which may increase issuer participation, but this result is not statistically significant.

The analysis also assessed whether other patient-level characteristics matter, but we found that a number of other characteristics were not significantly different between rural and urban areas, including responses on whether individuals had difficulty with daily tasks, difficulty walking, cancer diagnosis, prior smoking status, and having an average number of chronic conditions. The chronic conditions included high blood pressure, diabetes, arthritis (rheumatoid or non-rheumatoid), Alzheimer's disease, dementia, depression, high cholesterol, emphysema/asthma/COPD, osteoporosis, Parkinson's disease, coronary heart disease, and heart failure.

Discussion

This analysis contributes to our understanding of the MA experience of rural beneficiaries, finding that in many ways there are not systematic differences between rural and urban MA beneficiaries in terms of their observed health characteristics. There is no evidence in MCBS data that issuers provide lower quality benefits in rural areas. Since we observed that issuers tend to avoid rural counties in general, but not on the basis of demographic characteristics, this suggests that other issues (such as the raw numbers of potential enrollees over whom to spread risk, and/or issuers' ability to form provider networks) may be more important factors. Furthermore, the observation suggests that poor health as approximated by the demographic characteristics captured in MCBS data is also captured similarly in the risk adjustment formula (based on hierarchical condition categories, or HCCs), meaning that MA issuers are compensated for this observed risk. Indeed, a growing body of evidence corroborates this finding.⁹ Nonetheless, it is still possible that unobserved (or less easily quantifiable) risk may be greater in rural areas, or that other issues related to small risk pools may inhibit issuers from operating in rural places. This is corroborated by recent evidence that rural providers' patients have lower HCC risk scores despite generally seeming sicker by other measures.¹⁰

Endnotes

¹ These were the two most recent consecutive-year files at the time we began the analysis. We wanted to pool two consecutive years of data in order to achieve a large enough rural MA sample size.

² Baicker K, Chernew ME, Robbins JA. The spillover effects of Medicare managed care: Medicare Advantage and hospital utilization. *Journal of Health Economics*. 2013;32(6):1280-1300. Available at <https://doi.org/10.1016/j.jhealeco.2013.09.005>

³ Kemper L, Barker A, McBride T, Mueller K. *Rural Medicare Advantage Plan Payment in 2015*. RUPRI Center for Rural Health Policy Analysis, P2015-12. Available at <https://www.public-health.uiowa.edu/rupri/publications/policybriefs/2015/MA%20payment%20brief%202015.pdf>

⁴ Congressional Budget Office. *Predicting How Changes in Medicare Payment Rates Would Affect Risk-Sector Enrollment and Costs*. Washington, DC: Congressional Budget Office; 1997.

⁵ Morgan RO, Virnig BA, DeVito CA, Persily NA. The Medicare-HMO revolving door—the healthy go in and the sick go out. *New England Journal of Medicine*. 1997;337(3):169–75.

⁶ McWilliams JM, Hsu J, Newhouse JP. New risk-adjustment system was associated with reduced favorable selection in Medicare Advantage. *Health Affairs (Project Hope)*. 2012;31(12):2630-2640. doi:10.1377/hlthaff.2011.1344.

⁷ Kemper L, Barker A, McBride T, Mueller, K. *2012 Rural Medicare Advantage Quality Ratings and Bonus Payments*. RUPRI Center for Rural Health Policy Analysis, P2014-1. Available at <https://cph.uiowa.edu/rupri/publications/policybriefs/2014/Rural%20Medicare%20Advantage%20Quality%20Ratings.pdf>

⁸ This is likely due to a different mix of plan types, e.g. more regional PPOs and FFS plans, in rural areas. For more details, see: Kemper L, Barker A, McBride T, Mueller K. *Rural MA Enrollment and Premium Update*. RUPRI Center for Rural Health Policy Analysis, P2013-2. Available at <https://rupri.public-health.uiowa.edu/publications/policybriefs/2013/2012%20MA%20Enrollment.pdf>

⁹ Jacobs PD, Kronick R. Getting what we pay for: how do risk-based payments to Medicare Advantage plans compare with alternative measures of beneficiary health risk? *Health Services Research*. First published: 22 May 2018. <https://doi.org/10.1111/1475-6773.12977>

¹⁰ Hoffman AF, Reiter KL, Randolph RK. *Average Beneficiary CMS Hierarchical Condition Category (HCC) Risk Scores for Rural and Urban Providers*. NC Rural Health Research Program. July 2018. Available at <http://www.shepscenter.unc.edu/download/16967/>