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Rural-Urban Differences in Medicare Service Use in the Last Six Months of Life

Key Findings

- Rural decedents were less likely to have utilized inpatient, physician, home health care, hospice, and ambulance services in their last six months of life compared to urban residents.
 - A smaller proportion of deceased rural residents than urban decedents had been hospitalized in the six months before death: 64.9% of rural decedents versus 65.9% of urban decedents ($p < 0.01$).
 - Rural decedents were less likely to have utilized hospice care in their last six months of life compared to urban residents (44.8% versus 50.4%, respectively, $p < 0.001$). The proportion of beneficiaries entering hospice decreased with rurality, to a low of 38.4% among remote rural residents.
- Increasing the use of hospice care among rural residents may reduce unnecessary service use. In the last six months of life, hospice use was associated with two fewer days of care for urban decedents (median 12 days with hospice versus 10 without). Hospice use was also associated with fewer home health visits but was not associated with skilled nursing facility use.

Background

Care provided in the last year of life has garnered much attention over the past years. Concern has focused in two areas: patient preferences and costs associated with care during this time. With an increased emphasis on adhering to patient preferences, the use of intensive hospital or medical care in the last months of life has decreased, whereas the use of hospice and palliative care has increased¹.

Previous research has found wide variations in service utilization during the last six to twelve months of life. The Dartmouth Atlas Project has published several studies documenting regional variations in hospitalizations, hospital days, intensive care use, hospice use and high-intensity services during this time². Variations may be associated with resource availability; for example, some studies indicate that living farther from a hospital reduces hospitalizations in the last year of life³, whereas others have shown an association between hospital type and service intensity⁴. Other variations in use of end of life care are associated with patient characteristics, with non-white individuals being less likely to seek hospice or palliative care and more likely to have hospitalizations or other intensive services during this time^{1,5}. Some of these variations can be attributed to differences in personal preferences, as research suggests that non-white patients typically do not prefer hospice or palliative care^{6,7}.

Research concerning end of life care among rural residents is sparse but indicative of differences compared to urban residents. A review of previous research published in 2009 found that rural residents were less likely to use hospice care, and if they did use the service, they entered its care at a later time than urban residents⁸. Although the cited research has verified that use of hospice services at the end of life leads to improved patient satisfaction while significantly reducing health care service utilization, hospital readmissions and costs to the Medicare program, it is unclear how various factors, such as personal preferences, resource availability, environmental factors and regional differences, affect rural residents' use of these services and subsequent expenditures in the last six months of life. Beneficiaries that enroll in hospice must waive care related to their terminal illness. Thus, by policy, Medicare services may be reduced by enrolling in hospice. However, rural hospice providers face multiple challenges, ranging from travel burdens to workforce recruitment and retention, not typically encountered to the same degree by urban providers.⁹

This brief focuses on the current status of health care use during the last six months of life among Medicare beneficiaries. Specifically, we used data from a sample of Medicare beneficiary claims to assess whether service utilization (inpatient stays, physician visits, long-term care, skilled nursing, home health or hospice care) in the last six months of life differed between rural and urban decedents and across decedents of different race/ethnicity categories. Details concerning the individuals studied and the methods used in the report are provided in an Appendix. In the sections that follow, we examine the services used during the last six months of life.

Technical Notes

We used a 5% sample of Medicare beneficiaries in 2013 to examine our research question about Medicare beneficiaries who died between July 1, 2013 and December 31, 2013.

We excluded beneficiaries who died before July 1, 2013 so that we could study the utilization and expenditure patterns for a full six months before death. Of the 2.6 million people in the 5% Medicare claims data, 1.5% of the study population died between July 1, 2013 and December 31, 2013. We excluded beneficiaries who were missing information for residence, race/ethnicity, age or sex, as well as those who had no utilization in the last year of life, per the cost and use Research Identifiable Files. Finally, we examined only fee for service utilization and excluded beneficiaries with Medicare Advantage. Our final sample size was 39,544 beneficiaries. Further explanation of the methods and variable definitions can be found in the Appendix at the end of this report.

Geographic definitions

Our geographic analysis is based on county of residence. Counties were characterized based on level of rurality using Urban Influence Codes (UICs): metropolitan (UICs 1, 2), micropolitan (UICs 3, 5, 8), small adjacent (UICs 4, 6, 7) and remote rural (UICs 9, 10, 11, 12) counties.

Health Care Utilization

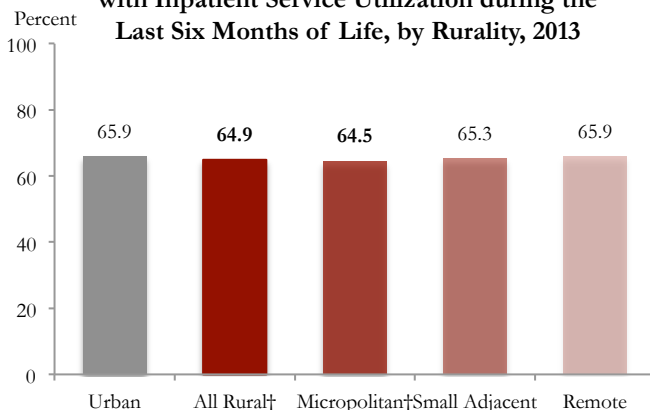
Inpatient Hospitalization

Overall, 65.7% of beneficiaries who died had an inpatient stay in their last six months of life. This proportion was lower among rural residents (64.9%) than urban residents (65.9%, $p < 0.001$). Micropolitan residents were the least likely to have received inpatient services (64.5%; Figure 1).

Across populations nationally, American Indian/Alaska Native beneficiaries were most likely to have had an inpatient hospital stay (73.6%), followed by African-American (72.3%), Hispanic (69.5%), and White (64.7%) beneficiaries. All values are significantly different than the referent group: white beneficiaries ($p < 0.05$).

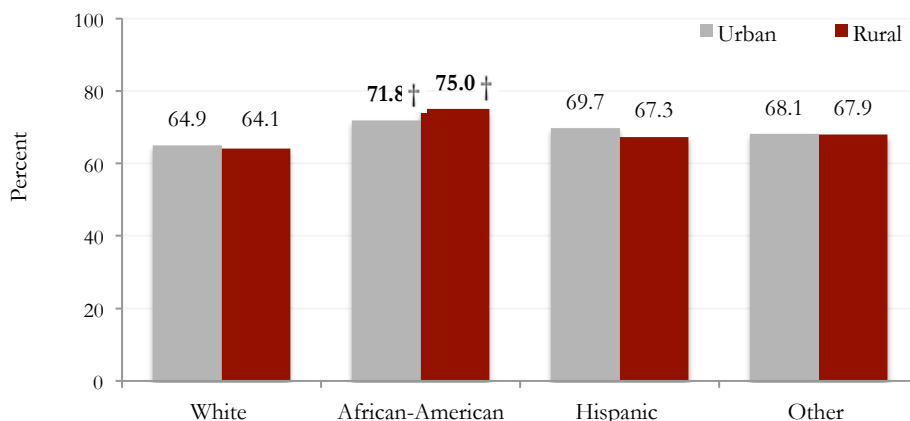
Within race/ethnicity subcategories, rural residents were less likely to utilize inpatient hospital services than their urban counterparts ($p < 0.05$), except for the category “other” and African-American beneficiaries (Figure 2). Rural African-American beneficiaries had much higher inpatient hospital utilization rates than white urban beneficiaries (75.0% versus 64.9%, respectively, $p < 0.001$).

Figure 1: Proportion of Medicare Beneficiaries with Inpatient Service Utilization during the Last Six Months of Life, by Rurality, 2013



† Indicates values significantly different than referent group: urban beneficiaries ($p < 0.05$).

Figure 2: Proportion of Medicare Beneficiaries with Inpatient Service Utilization during the Last Six Months of Life by Race/Ethnicity and Residence, 2013



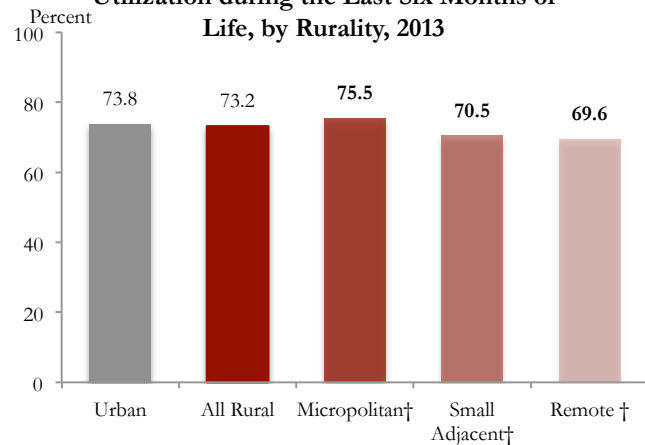
† Indicates values significantly different than referent group: white, urban beneficiaries ($p < 0.05$). Because of small numbers of rural residents, American Indian/Alaska Native and Asian/Pacific Islander populations are aggregated for all service analyses.

Physician Visit

During their last six months of life, 73.6% of all beneficiaries had a physician visit.* While rural residents as a whole did not differ from urban residents in the likelihood of one or more physician visits, differences emerged across levels of rurality. Micropolitan residents were more likely than urban beneficiaries to have had a physician visit, while residents of small adjacent and remote rural counties were less likely to have received this service ($p < 0.05$, Figure 3).

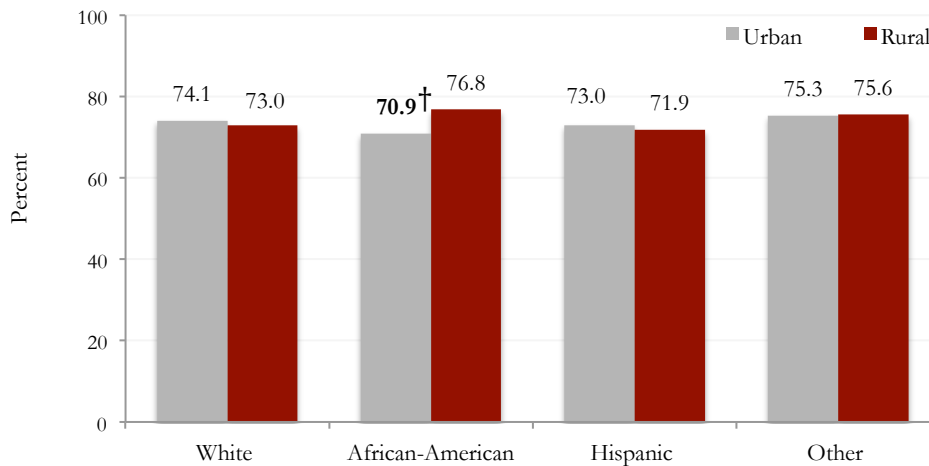
Across populations nationally, African-American (71.8%) beneficiaries had a lower proportion of physician visits than white beneficiaries (73.8%, $p < 0.05$). The gap between urban white beneficiaries (74.1%) and urban African-American beneficiaries (70.9%) was particularly large ($p < 0.001$; Figure 4). Other differences were not statistically significant.

Figure 3: Proportion of Medicare Beneficiaries with Physician Service Utilization during the Last Six Months of Life, by Rurality, 2013



† Indicates values significantly different than referent group: urban beneficiaries ($p < 0.05$ or better).

Figure 4: Proportion of Medicare Beneficiaries with Physician Visits during the Last Six Months of Life by Race/Ethnicity and Residence, 2013



† Indicates values significantly different than referent group: white, urban beneficiaries ($p < 0.05$)

*Physician visits were defined by the number of evaluation and management services in a physician office setting using HCPCS codes 99201, 99202, 99203, 99204, 99205, 99211, 99212, 99213, 99214 and 99215.

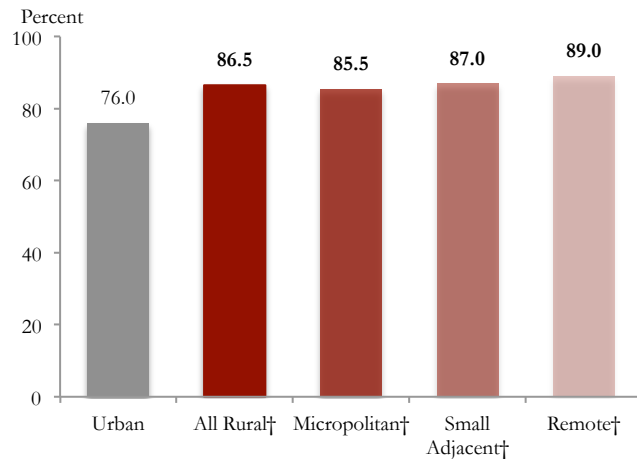
Outpatient Clinic Visit

During their last six months of life, 78.3% of all beneficiaries had an outpatient visit.* This proportion was markedly higher among rural residents (86.5%) than urban residents (76.0%, $p < 0.0001$; Figure 5) and was present across all levels of rurality.

Across populations nationally, American Indian/Alaska Native beneficiaries had the highest proportion with an outpatient visit (85.1%). Asian/Pacific Islander (74.8%), Hispanic (74.0%), and “Other” (71.8%) beneficiaries had the lowest rates of outpatient clinic visits. All values mentioned are significantly different than the referent group: white beneficiaries ($p < 0.05$).

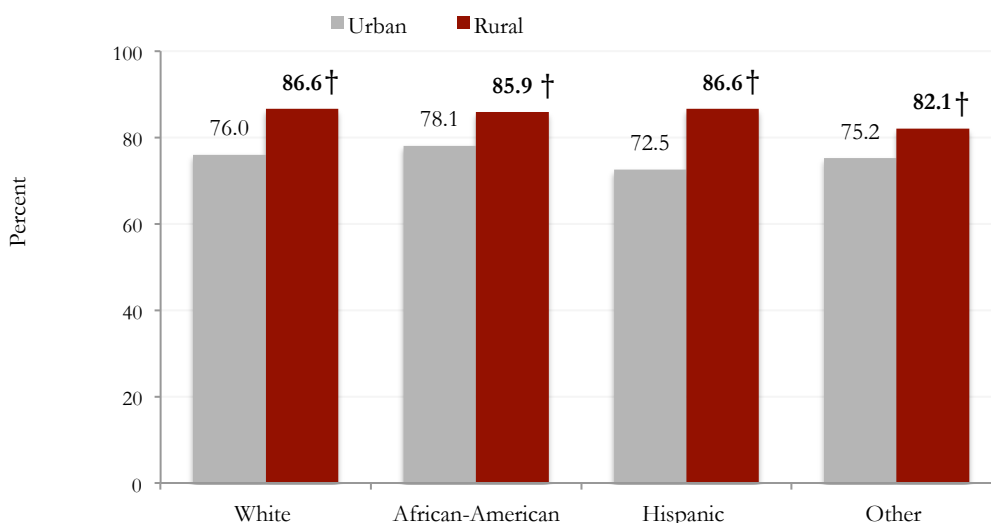
Subset by race/ethnicity, rural beneficiaries received outpatient services at higher rates than their urban counterparts ($p < 0.05$, Figure 6) except for the category “other” beneficiaries. Rural Hispanic beneficiaries had much higher outpatient hospital utilization rates than white urban beneficiaries (86.6% versus 76.0%, respectively, $p < 0.001$).

Figure 5: Proportion of Medicare Beneficiaries with Outpatient Visits during the Last Six Months of Life by Rurality, 2013



† Indicates values significantly different than referent group: urban beneficiaries ($p < 0.05$).

Figure 6: Proportion of Medicare Beneficiaries with Outpatient Visits during the Last six months of Life by Race/Ethnicity and Residence, 2013



† Indicates values significantly different than referent group: white, urban beneficiaries ($p < 0.05$)

*Outpatient visits were defined as a visit to a hospital outpatient department (bill type 85 or 13), outpatient dialysis facility (bill type 72) or other Part B institutional services (bill type 12, 22, 23, 74, 75, 76, 34, 14, 83). Bill type is a combination variable designed by the Research Data Assistant Center (RESDAC) combining facility type and type of service.

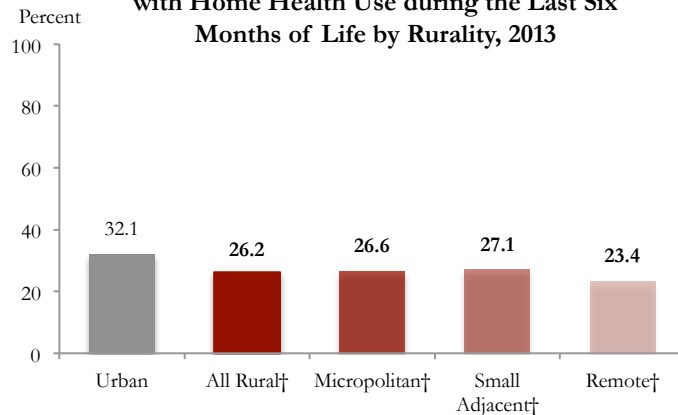
Home Health

Nearly one-third (30.8%) of all beneficiaries who died had a home health visit in their last six months of life. This proportion was lower among rural residents (26.2%) than urban residents (32.1%, $p < 0.0001$) (Figure 7). Remote residents were the least likely to have received home health visits (23.4%) (Figure 7).

Across populations nationally, there were differences by race/ethnicity. Hispanic (36.9%) and African-American (36.7%) beneficiaries were more likely to receive home health visits than White beneficiaries (29.9%, p -value < 0.05).

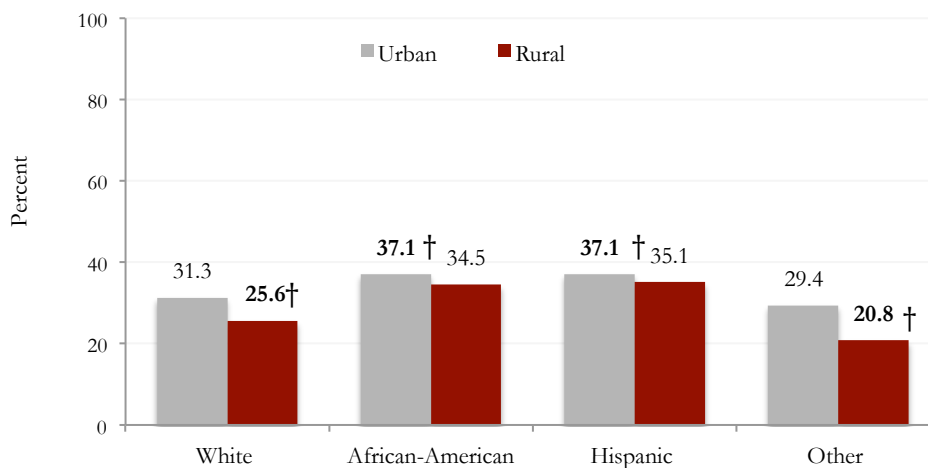
Looking at the intersection of race/ethnicity with residence, urban residents were more likely to receive home health visits than rural beneficiaries ($p < 0.01$; Figure 8). Rural white beneficiaries (25.6%) were less likely to receive home health visits than urban white beneficiaries (31.3%).

Figure 7: Proportion of Medicare Beneficiaries with Home Health Use during the Last Six Months of Life by Rurality, 2013



† Indicates values significantly different than referent group: urban beneficiaries ($p < 0.05$).

Figure 8: Proportion of Medicare Beneficiaries with Home Health Use during the Last Six Months of Life by Race/Ethnicity and Residence, 2013



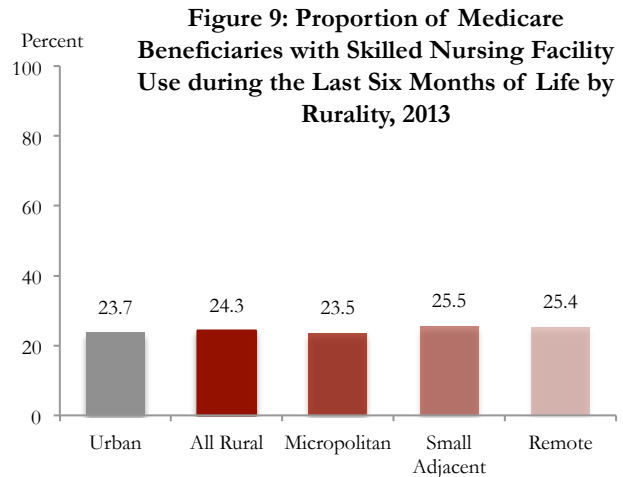
† Indicates values significantly different than referent group: white, urban beneficiaries ($p < 0.05$)

Service Utilization: Skilled Nursing Facility

Overall, 23.8% of beneficiaries who died had spent some time in a skilled nursing facility in their last six months of life. There were no differences among beneficiaries based on rurality regarding skilled nursing facility usage (Figure 9).

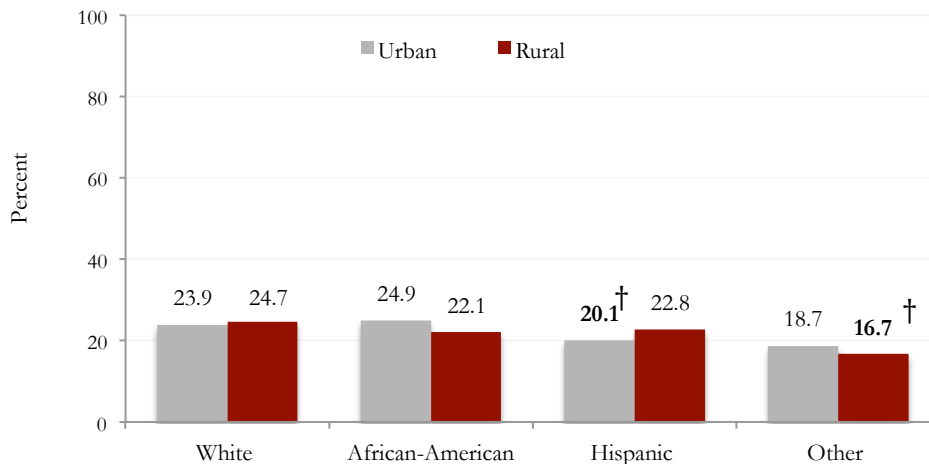
Across populations nationally, Hispanic beneficiaries (21.1%) had the highest rates of skilled nursing facility use and Asian/Pacific Islander beneficiaries (18.1%) had the lowest proportions ($p < 0.05$).

Examining race/ethnicity and residence, Hispanic urban beneficiaries utilized skilled nursing facilities at lower rates than white urban beneficiaries (20.1% versus 23.9%, respectively, $p < 0.001$; Figure 10). Utilization was also significantly lower among rural residents of “other” race/ethnicity (16.7%; Figure 10).



† Indicates values significantly different than referent group: urban beneficiaries ($p < 0.05$).

Figure 10: Proportion of Medicare Beneficiaries with Skilled Nursing Facility Use during the Last Six Months of Life by Race/Ethnicity and Residence, 2013



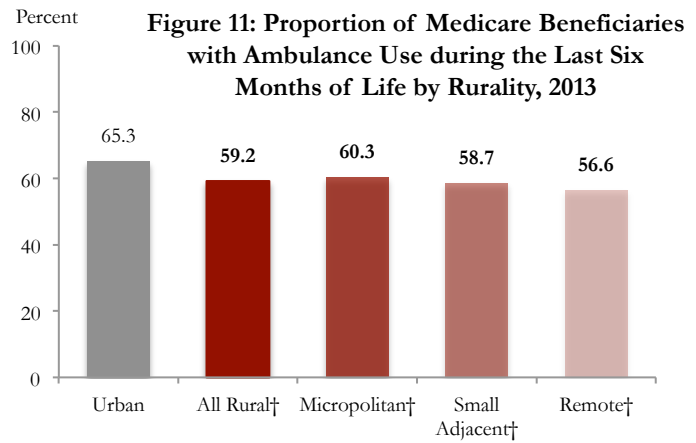
† Indicates values significantly different than referent group: white, urban beneficiaries ($p < 0.05$)

Service Utilization: Ambulance

Nearly two-thirds (63.9%) of all deceased beneficiaries used an ambulance during their last six months of life. This proportion was lower among rural residents (59.2%) than urban residents (65.3%, $p < 0.0001$) (Figure 11). Remote residents were the least likely to have received home health visits (56.6%).

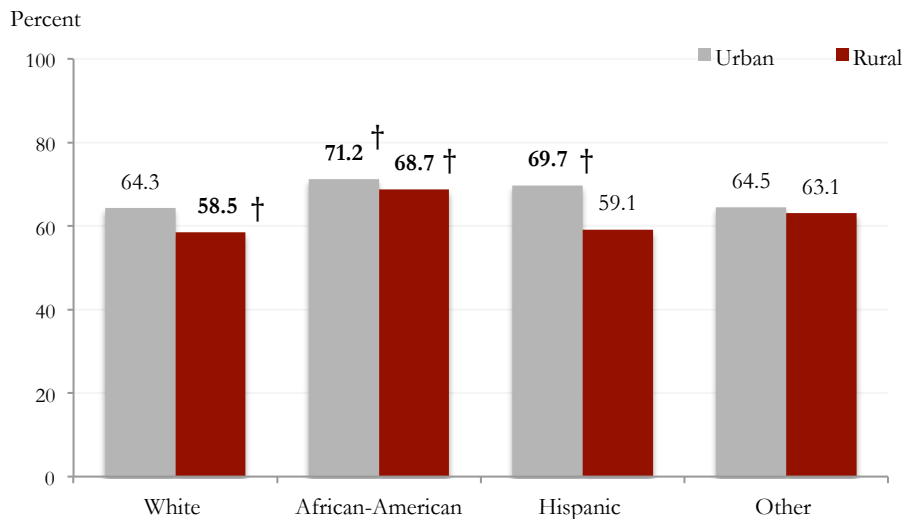
Across populations nationally, differences in ambulance use were present across race/ethnicity. A higher proportion of African-American (70.8%) and Hispanic (68.6%) than white beneficiaries (62.9%, $p\text{-value} < 0.05$) had ambulance use.

Within race/residence groupings, four categories differed from the referent, urban white beneficiaries (64.3%). Rural white beneficiaries were less likely to have used an ambulance (58.5%) than their urban peers, while both urban and rural African-American decedents (71.2% and 68.5% respectively) had higher ambulance utilization rates ($p < 0.05$; Figure 12). Urban Hispanic decedents (69.7%) were also more likely to have used ambulance services than urban white beneficiaries (Figure 12).



† Indicates values significantly different than referent group: urban beneficiaries ($p < 0.05$).

Figure 12: Proportion of Medicare Beneficiaries with Ambulance Use during the Last Six Months of Life by Race/Ethnicity and Residence, 2013



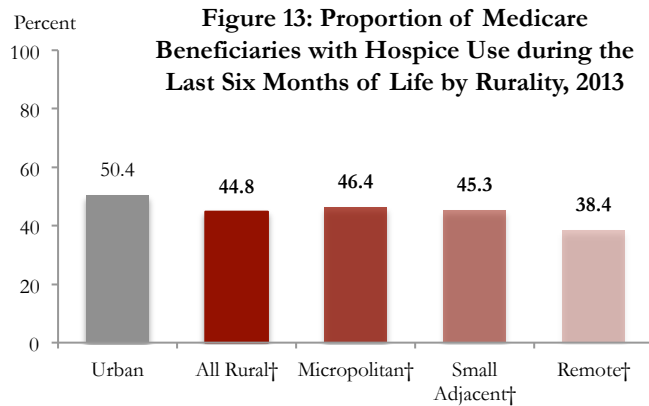
† Indicates values significantly different than referent group: white, urban beneficiaries ($p < 0.05$).

Service Utilization: Hospice

Overall, 49.2% of beneficiaries who died had spent some time enrolled in the hospice program* in their last six months of life. This proportion was lower among rural residents (44.8%) than urban residents (50.4%, $p < 0.0001$; Figure 13), with residents at all levels of rurality differing from urban decedents.

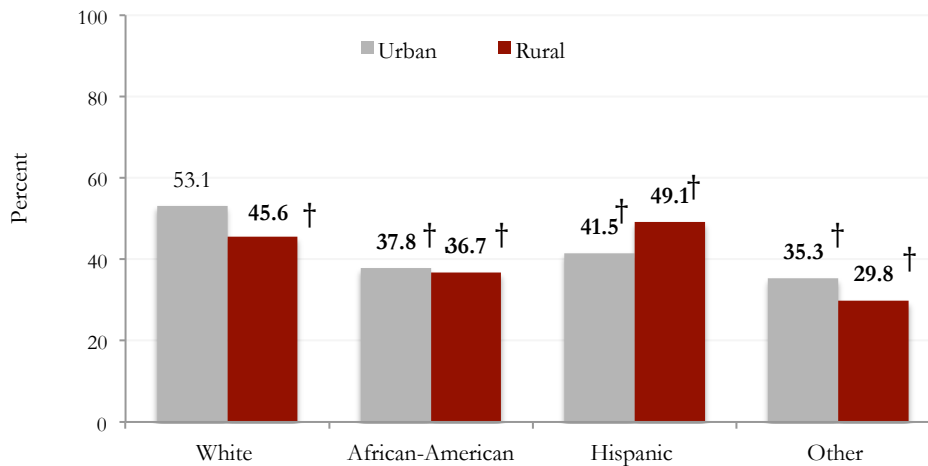
Across populations nationally, White (51.3%), Hispanic (42.3%), and “Other” (42.0%) beneficiaries had the highest rates of hospice use. African-American (37.7%), Asian/Pacific Islander (33.6%), and American Indian/Alaska Native beneficiaries (30.8%) had the lowest proportions ($p < 0.05$).

Examining race/ethnicity and residence, white, urban decedents were most likely to have used hospice (53.1%); all other beneficiaries had usage rates statistically lower than this referent group. See Figure 10, below.



† Indicates values significantly different than referent group: urban beneficiaries ($p < 0.05$).

Figure 14: Proportion of Medicare Beneficiaries with Hospice Use during the Last Six Months of Life by Race/Ethnicity and Residence, 2013



† Indicates values significantly different than referent group: white, urban beneficiaries ($p < 0.05$)

*As indicated, decedents were considered to have used hospice if they enrolled in the program at any time during the last six months of life. The use of a fixed time frame, rather than the post-enrollment period alone, is recommended to reduce endogeneity associated with the decision to enter hospice, which often follows a hospitalization. For a further discussion, see the 2015 report for MedPAC, “Spending in the Last Year of Life and the Impact of Hospice on Medicare Outlays.”¹⁰

Intersectionality: Hospice Use and Other Modes of Care

The use of hospice services at the end of life can lead to improved patient satisfaction while potentially reducing health service utilization, hospital readmissions and costs to the Medicare program⁸. Within both rural and urban decedents, those who had enrolled in the hospice program at any point were less likely to have experienced inpatient hospitalization, skilled nursing facility use, and ambulance service use during the last six months of life (Table 1). Conversely, among both rural and urban residents, hospice enrollment was associated with increased use of home health care. Thus, the overall mix of services among hospice enrollees suggested less use of acute care modes, and a greater likelihood of care at the decedent’s residence.

Table 1: Proportion of Medicare Beneficiaries with Any Indicated Service Use during the Last Six Months of Life by Residence and Receipt of Hospice Services, 2013

	Rural			Urban		
	All	Hospice	Non-Hospice	All	Hospice	Non-Hospice
Inpatient	64.9 <i>a</i>	62.6 <i>b</i>	66.8	65.9 <i>a</i>	64.3 <i>b,c</i>	67.5
Skilled Nursing	24.3	21.7 <i>b</i>	26.4	23.7	22.4 <i>b</i>	25.0
Home Health	26.2 <i>a</i>	29.0 <i>b,c</i>	24.0 <i>d</i>	32.1 <i>a</i>	35.2 <i>b,c</i>	29.0 <i>d</i>
Ambulance	59.2 <i>a</i>	57.4 <i>b,c</i>	60.8 <i>d</i>	65.3 <i>a</i>	63.6 <i>b,c</i>	67.1 <i>d</i>
^a indicates significant differences between rural and urban decedents (p<0.05 or better) ^b indicates significant differences between hospice and non-hospice user within level of rurality (p<0.05 or better) ^c indicates significant differences among hospice users across levels of rurality (p<0.05 or better) ^d indicates significant differences among non-hospice users across levels of rurality (p<0.05 or better)						

Although hospice use was associated with a reduced likelihood of *any* use of inpatient, skilled nursing facility, or ambulance services among rural residents (Table 1, above), once use did occur, patterns did not differ. Thus, among persons with any inpatient admission, skilled nursing facility use, or home health use, the number of days of care was similar for hospice and non-hospice beneficiaries (data not shown).

Conclusions and Recommendations

Determining the medical appropriateness of care during the final months of life, as recorded in billing information, is difficult. Further, billing data do not record patient preferences and expressed wishes. However, assuming that patient preferences are similarly distributed across rural and urban beneficiaries, examining differences in care during this period suggests areas for possible improvement that might both reduce potentially inappropriate care and better comply with patient desires.

Overall, rural decedents were more likely to have used outpatient clinic services and less likely to have used inpatient, ambulance, home health, and hospice services (Table 3). It cannot be ascertained whether these differences result from patient preferences or from differences in facility availability, but they suggest a more conservative use of resources for rural decedents.

Lower use of hospice services among rural residents may represent an opportunity to further reduce utilization of acute services. Participation in hospice care was found to reduce the likelihood of inpatient, SNF and ambulance use, while being linked to a greater probability of home-based care.

	Rural %	Urban %	P-value
Physician Office Visit	73.2	73.8	ns
Outpatient Clinic Visit	86.5	76.0	<0.0001
Inpatient Stay	64.9	65.9	<0.0001
Ambulance service	59.2	65.3	<0.0001
SNF stay	24.3	23.7	ns
Home Health	26.2	32.1	<0.0001
Hospice	44.8	50.4	<0.0001

Encouraging use of hospice care among patients for whom this service is appropriate could be beneficial both for overall health services use and for patients. Given that much higher proportions of rural residents visited a physician or outpatient clinic during their last months of life than were hospitalized, discussions of hospice and other forms of palliative care may be best undertaken in those settings.

Further research is needed to examine service availability in rural areas, particularly for hospice, and to clarify how availability may affect care at the end of life. Research has documented the many barriers perceived by rural hospice directors, ranging from high “windshield time” associated with greater rural distances to recruiting and maintaining availability across as many as 11 workforce disciplines, coupled with reimbursement levels that may not reflect rural expenses⁹. Identifying and promoting successful models for hospice care, particularly in remote rural counties, is also needed.

Appendix A. Technical Notes

Data for the report were obtained from the 2013 Medicare Research Identifiable Files, utilizing only fee-for-service claims.

Data Sources

Beneficiary Master Summary File. The beneficiary master summary file contains beneficiary age, race, dual-eligible status and county of residence. These data were used to identify the rurality of the beneficiaries' residence, their demographic characteristics and their dual-eligible status (Medicare only versus Medicare and some Medicaid coverage).

Carrier Claims File. The carrier claims file contains all physician encounters and was used to identify these encounters with a place-of-service code indicating delivery in an office, clinic or other ambulatory setting.

MEDPAR. The Medicare Provider Analysis and Review (MEDPAR) file contains data from claims for services provided to beneficiaries admitted to Medicare-certified inpatient hospitals and skilled nursing facilities. The accumulation of claims beginning from a beneficiary's date of admission to an inpatient hospital from which the beneficiary has since been discharged, or to a skilled nursing facility where the beneficiary may still be a patient, represents one stay. A stay record may represent one claim or multiple claims. We linked the 5% sample of Medicare administrative data from MEDPAR acute hospital claims data that can trace the path of care for each patient to multiple patient-level Medicare claims data and Medicare beneficiary summary data.

Home Health Claims File. This file contains records for the use of home health service, if any. Home health visits were aggregated per episode of care and not on a visit-by-visit basis, as this is how home health providers are reimbursed for services. These episodes were summed by beneficiary using claim-type codes indicating either an outpatient- or inpatient-based home health service delivery.

Hospice Claims File. This file contains claims submitted by Hospice providers and was used to identify all encounters provided by a Hospice provider.

Outpatient Claims File. This file contains claims delivered in outpatient settings. We identified all encounters with a place-of-service code indicating delivery in clinical settings, including hospital departments, outpatient settings, clinics, freestanding centers and rehabilitation centers.

AHRF. The Area Health Resource File (AHRF) is a family of health data resource products drawn from an extensive county-level database assembled annually from over 50 sources. The AHRF data elements are in three categories: (a) healthcare professions; (b) hospitals and healthcare facilities; and (c) the Census, population data and the environment. We linked data from the AHRF to generate rural/urban and regional characteristics in the sample.

Population Studied

We analyzed data on all beneficiaries who were eligible for Medicare for the entire year 2013 and those who died after June 30, 2013. This allowed for us to capture a full six months of claims prior to death for the beneficiary. Exclusions were also made for beneficiaries with missing data for covariates. We excluded beneficiaries who were missing information for residence, race/ethnicity, age or sex, as well as those who had no utilization in the last year of life, per the cost and use RIF. Finally, we examined only fee for service utilization and excluded beneficiaries with Medicare advantage. Our final sample size was 39,544 beneficiaries.

Overall, 1.5% (n=39,544) of the study population died during the last six months of 2013. The mortality rate was lower for beneficiaries who lived in urban counties (1.4%) compared to rural

settings (1.8%, $p < 0.0001$). Differences also existed by race/ethnicity: American Indian/Alaska Native (1.9%) and white beneficiaries (1.6%) had higher mortality rates than the other groups ($p < 0.0001$; Table A-1). This trend was not true among rural residents, where African-American beneficiaries had mortality rates similar to those of white and American Indian/Alaska Native beneficiaries.

Mortality was also higher for females, older-age beneficiaries and dual-eligibility beneficiaries, in both rural and urban settings. Regionally, the Midwest had the highest mortality rates for both urban and rural beneficiaries, followed by the South.

Figure A-1: Mortality Rates by Race/Ethnicity within Rurality

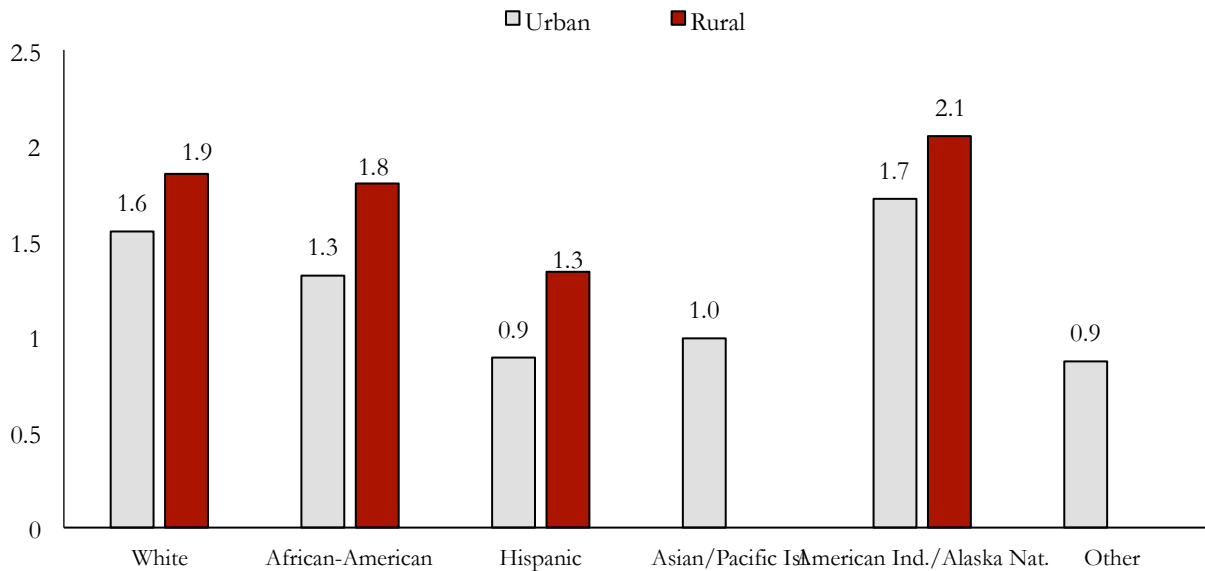


Table A-1: Characteristics of Medicare Beneficiaries Who Died between July 1, 2013 and December 31, 2013, by rurality

Characteristics	Total (n=2,562,529)		Urban (n=2,119,367)		Rural (n=483,841)		p-value*
	n	%	n	%	n	%	
All	39544	1.54	30674	1.44	8870	1.83	
Sex							0.06
	Male	16458	1.48	12681	1.42	3777	1.77
	Female	23086	1.54	17993	1.47	5093	1.88
Age groups**							<0.0001
	<65	3683	0.84	2805	0.81	878	0.95
	65-74	7670	0.65	5841	0.61	1829	0.86
	75-84	11925	1.75	9138	1.64	2787	2.22
	85-94	13678	4.86	10830	4.65	2848	5.90
	>95	2588	9.43	2060	9.12	528	10.86
Race/Ethnicity							<0.0001
	White, NH	33116	1.61	25154	1.55	7962	1.85
	African-American, NH	3636	1.38	3067	1.32	569	1.80
	Other	188	0.89	164	0.87	**	
	Asian/Pacific Islander	703	1.01	667	0.99	**	
	Hispanic	1693	0.92	1522	0.89	171	1.34
	American Indian/Alaska Native	208	1.87	100	1.72	108	2.05
Region							<0.0001
	Northeast	7466	1.49	6610	1.47	856	1.65
	Midwest	9941	1.68	6885	1.60	3056	1.90
	South	15667	1.62	11791	1.55	3876	1.86
	West	6470	1.20	5388	1.12	1082	1.74
Dual eligible							<0.0001
	Between 1 and 12 months	12777	2.50	9536	2.34	3241	3.16
	No months	26767	1.28	21138	1.24	5629	1.48
*p-value indicates significant differences between urban and rural							
*Age at beginning of reference year (January 1, 2013)							
**N<50							

Measures

We used several key analytical variables for the analysis. Rural residence was defined at the county level using Urban Influence Codes (UICs) in two levels (rural or urban) and in four levels (urban, micropolitan rural, small adjacent rural or remote rural). Region was defined as Midwest, Northeast, South or West. Dual-eligible status was defined as a patient having been dual eligible for anytime between one and 12 months. Race/ethnicity was characterized as non-Hispanic white, non-Hispanic African American, Asian/Pacific Islander, Hispanic, and American Indian/Alaska Native or other. Due to small sample sizes, the Asian/Pacific Islander, American Indian/Alaska Native and “other” categories were collapsed into a single category, “Other,” for most analyses.

Statistical Analysis

We used standard statistical analysis procedures to estimate frequencies and proportions for categorical variables. Bivariate analyses were carried out to detect statistical significance between variables using chi-square tests. The significance level was defined as $p < 0.05$. Summary data for the figures presented in the preceding report are provided in Table A-2 on the next page.

Table A-2: Proportion of Medicare Beneficiaries Using Selected Services during the Last Six Months of Life by Residence and Race/Ethnicity, 2013

	Total %	Urban %	Rural %
Inpatient hospitalization			
White	64.7	64.9	64.1
African American	72.3	71.8	75.0
Hispanic	69.5	69.7	67.3
Asian/Pacific Islander	67.1	67.5	*
Amer. Indian/Alaska Nat.	73.6	74.0	73.2
Other	65.4	67.1	*
Physician visits			
White	73.8	74.1	72.9
African American	71.8	70.9	76.8
Hispanic	72.9	73.0	71.9
Asian/Pacific Islander	74.8	74.8	*
Amer. Indian/Alaska Nat.	78.4	83.0	74.1
Other	73.9	72.6	*
Outpatient clinic visits			
White	78.5	76.0	86.6
African American	79.3	78.1	85.9
Hispanic	74.0	72.5	86.6
Asian/Pacific Islander	74.8	74.7	*
Amer. Indian/Alaska Nat.	85.1	87.0	83.3
Other	71.8	70.1	*
Home health			
White	29.9	31.3	25.6
African American	36.7	37.1	34.5
Hispanic	36.9	37.1	35.1
Asian/Pacific Islander	30.2	31.2	*
Amer. Indian/Alaska Nat.	24.5	*	*
Other	24.5	*	*
Skilled nursing facility			
White	24.1	23.9	24.7
African American	24.5	24.9	22.1
Hispanic	21.1	21.0	*
Asian/Pacific Islander	18.1	17.7	*
Amer. Indian/Alaska Nat.	19.2	*	*
Other	18.6	*	*
Ambulance			
White	62.9	64.3	58.5
African American	70.8	71.2	68.7
Hispanic	68.6	69.7	59.1
Asian/Pacific Islander	65.0	65.2	*
Amer. Indian/Alaska Nat.	63.5	62.0	64.8
Other	62.3	62.8	*
* indicates N<50			

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