



HHS Public Access

Author manuscript

J Ambul Care Manage. Author manuscript; available in PMC 2018 April 01.

Published in final edited form as:

J Ambul Care Manage. 2017 ; 40(2): 139–149. doi:10.1097/JAC.000000000000158.

Use of Federally Qualified Health Centers and Potentially-Preventable Hospital Utilization among Older Medicare-Medicaid Enrollees

Brad Wright, PhD,

Assistant Professor, Department of Health Management & Policy, University of Iowa College of Public Health, 145 N. Riverside Dr., Iowa City, IA 52242, 319-384-4369 (phone), 319-384-4371 (fax)

Andrew J. Potter, MA, and

Doctoral Student, Department of Health Management & Policy, University of Iowa College of Public Health, 145 N. Riverside Dr., Iowa City, IA 52242, 319-384-3860 (phone), 319-384-4371 (fax)

Amal N. Trivedi, MD, MPH

Associate Professor, Department of Health Services, Policy & Practice, School of Public Health, Brown University, 121 South Main St., 6th Floor, Providence, RI 02903, and Investigator, Center for Innovation in Long-Term Services and Supports, Providence Veterans Affairs Medical Center, Providence, RI, 401-863-9941 (phone), 401-863-3713 (fax)

Abstract

Using Medicare claims data from 2007 to 2010, we sought to determine whether dual-eligibles 65 and older who utilize federally qualified health centers (FQHCs) have lower rates of ambulatory care sensitive (ACS) hospitalizations and emergency department (ED) visits than non-users. We found that FQHC use is associated with increased ACS hospitalization rates for whites and other races, but a decrease among Blacks. Depending on race, FQHC use is associated with an increase of 24 – 43 ACS ED visits per thousand persons annually. More research is needed to understand why FQHC use is associated with these outcomes among dual-eligibles.

Keywords

Dual-eligibles; Federally qualified health center; Ambulatory care sensitive conditions; Hospitalization; Emergency department

The nation's roughly 10 million dual-eligibles—low-income elderly and disabled persons covered by both Medicaid and Medicare—have captured the attention of policymakers, health care providers, and others concerned with controlling health care spending, improving quality, and ensuring access to care.(Ku & Broaddus, 2003; Thorpe, 2011) Dual-eligibles frequently experience non-financial barriers to accessing primary care, resulting in

Correspondence to: Brad Wright.

Conflicts of Interest: No other conflicts declared.

overutilization of potentially preventable acute care, increased morbidity and mortality, and disproportionately high costs.(Laditka, Laditka, & Mastanduno, 2003; Medicare-Medicaid Coordination, 2013; Niefeld & Kasper, 2005) For example, dual-eligibles are more likely than other Medicare beneficiaries to visit the emergency department (ED) or be hospitalized for ambulatory care sensitive conditions (ACSCs).(Jiang, Wier, Potter, & Burgess, 2010) Rates of ED use and hospitalization for these ACSCs are frequently referred to as “potentially preventable” or “potentially avoidable” and have been widely used as an indicator of limited access to primary care.(Billings et al., 1993; Culler, Parchman, & Przybylski, 1998; Epstein, 2001; Falik, Needleman, Wells, & Korb, 2001; Jiang et al., 2010)

In 2009, Medicare-Medicaid dual-eligibles were hospitalized approximately 2.3 million times, and more than 1 in 4 of these hospitalizations (600,000) were potentially preventable. (Segal, Rollins, Hodges, & Roozeboom, 2014) This hospital-based care for ACSCs among the dual-eligible population likely reflects inadequate access to primary care, and certainly represents an attractive target for quality improvement and cost savings in the Medicare and Medicaid programs. Specifically, providing continuous, comprehensive, and patient-centered primary care to dual-eligibles has the potential to reduce rates of hospitalization and ED use.

Federally qualified health centers (FQHCs) are health care “safety net” providers that deliver primary care regardless of insurance status or ability to pay. They also offer a range of non-clinical enabling services designed to overcome non-financial barriers to health care access. (D. B. Wright, 2012) While most of the 20 million patients served by FQHCs each year are low-income individuals who are either uninsured or enrolled in Medicaid, the number of Medicare beneficiaries served by FQHCs has more than doubled since 1996, and now represents approximately 1.5 million individuals.(National Association of Community Health, 2011; Proser, 2005)

FQHCs often deliver high-quality patient-centered medical care with a focus on care coordination and management, and they have been shown to treat ACSCs effectively. (Anderson & Olayiwola, 2012; Deprez, Pennell, & Libby, 1987; Falik et al., 2001; Goldman, Chu, Tran, Romano, & Stafford, 2012) A number of studies have found that areas and individuals served by an FQHC have lower rates of ED utilization (Hossain & Laditka, 2009; Rust et al., 2009) and hospitalization for ACSCs.(Deprez et al., 1987; Epstein, 2001; Falik et al., 2006; Falik et al., 2001; Garg, Probst, Sease, & Samuels, 2003; Probst, Laditka, & Laditka, 2009) By contrast, other research has found that FQHCs users are significantly more likely to experience potentially preventable hospitalizations or visit the ED.(B. Wright, Potter, & Trivedi, 2015) However, no prior studies have evaluated the relationship between receiving care at an FQHC and the subsequent receipt of hospital-based care for ACSCs among dual-eligibles, a population with complex and often unmet health care needs.

Therefore, the objective of this study is to determine whether dual-eligibles who receive care at an FQHC have lower rates of hospital-based care for ACSCs as compared with dual-eligibles who do not receive care from FQHCs. Given the potential for FQHCs to enhance access to primary care and other critical enabling services, we hypothesized that dual-eligibles who visit an FQHC will have fewer hospitalizations and ED visits for ACSCs.

Methods

Data sources and study population

We conducted a retrospective claims-based analysis using all Medicare Part A claims and all Medicare Part B institutional claims for years 2007–2010. Using the Medicare enrollment file, we restricted the analysis to individuals who were enrolled in Medicare Part A, Medicare Part B, and Medicaid for the entire year, who were not enrolled in Medicare Advantage at any point during the year, and whose current reason for Medicare eligibility was based on being age 65 or older. Because of our use of a lagged independent variable, which is described below, we required dual-eligibles to meet these criteria in two consecutive years to be part of the sample.

As shown in Table 1, we further restricted our study sample to dual-eligibles with geographic access to an FQHC. Using the outpatient claims file, we flagged care provided by FQHCs when type of bill code 731 or 771 was present on the claim. Using methods described elsewhere, we identified a comparator group of FQHC non-users consisting of all dual-eligibles residing in a Primary Care Service Area (PCSA) containing an FQHC. (Dartmouth Institute for Health & Clinical; B. Wright et al., 2015)

Finally, we excluded individuals who were enrolled with missing or unrealistic data, including those who could not be assigned to the District Columbia or one of the 50 states, whose PCSA could not be determined, whose metropolitan status could not be determined, or whose age was inconsistent with their current reason for Medicare eligibility (i.e. enrollees who were less than 64 years old at the beginning of the year they were eligible for Medicare on the basis of age).

Variables

Our primary outcome of interest in this study is hospital-based care for ACSCs. The Agency for Healthcare Research and Quality (AHRQ) and others have identified a set of ACSCs that can be prevented or effectively managed with regular use of primary care services. Like most studies, we focus on inpatient hospitalizations. However, because as many as one-third to one-half of all ED visits among the elderly result in hospitalization, and approximately two-thirds of ED visits in the elderly population are potentially preventable, we also opted to model potentially preventable ED visits among dual-eligibles as a function of FQHC use. (Carter, Datti, & Winters, 2006; Oster & Bindman, 2003) Both outcome variables are a count of the number of visits.

We identified all hospitalizations using Part A claims, and we identified all ED visits using both Part A and Part B claims listing any revenue code 0450–0459 or 0981. Effectively, ED visits resulting in hospitalizations were defined as both ED visits and hospitalizations. However, since we conducted analyses separately for each outcome, it is appropriate to include these events in both analyses. We used Prevention Quality Indicator software available from AHRQ to flag specific hospitalizations and ED visits as being for an ACSC, and thus, “potentially preventable.”(Agency for Healthcare & Quality, 2013)

Our main independent variable was FQHC use, which we defined as a dichotomous measure (=1 if an individual ever visited an FQHC during the year). A sensitivity analysis defining FQHC use as a count of visits did not alter the results (data available upon request). To ensure proper time-ordering between FQHC use and our outcomes of interest, we lagged our independent variable by one year. A sensitivity analysis excluding the lag did not alter the results (data available upon request). Thus, we predicted ACS hospitalizations and ED visits as a function of FQHC use in the prior year (e.g FQHC use in 2007 for ACS events in 2008).

Model covariates included age (in years), sex, race/ethnicity (white, black, other), an indicator of disability as the original reason for Medicare eligibility, and the count of each of 26 chronic conditions from the CMS Chronic Conditions Data Warehouse (to control for beneficiary health status). Given prior evidence that FQHCs might reduce disparities in ACS hospitalizations, we also included interactions between race and FQHC use.(B. Wright et al., 2015) The models also included county-level fixed effects, which are used to control for a wide variety of unobserved state and county characteristics. Because counties, unlike PCSAs or provider catchment areas, do not cross state lines, these fixed effects will capture state-specific differences in Medicaid policy, while also controlling for important intrastate variation in Medicaid and Medicare spending.(Kronick & Gilmer, 2012) The county-level fixed effects will also control for differences in the local supply of health care providers and facilities, which have been identified as a driver of hospitalizations for some ACSCs.(Carter et al., 2006) Our county-level fixed effects are modeled using unconditional maximum likelihood estimation with county indicators. In addition to being supported by simulation studies, this approach has the advantage of estimating parameters for each county, which allows us to correctly calculate marginal effects in this nonlinear model with interaction terms.(Allison & Waterman, 2002) Finally, we included a set of yearly dummy variables to capture general time trends.

Analyses

First, we first compared the characteristics of older Medicare-Medicaid enrollees who use FQHCs with those of nonusers. Then, we constructed a series of individual-level negative binomial regression models to examine the relationship between receipt of care at an FQHC and the number of hospitalizations (model 1) or ED visits (model 2) for an ACSC. To account for correlation between the observations of the same subject in multiple years, clustered standard errors (at the county level) were used in each model. Finally, we exponentiated the coefficients to present the results as incidence rate ratios. The Brown University and University of Iowa Institutional Review Boards approved the protocol for this study, including a waiver of informed consent for the use of these secondary claims data. We conducted all analyses using SAS 9.4 and Stata 12.1.

Results

Over the three-year study period, the absolute number of older dual-eligibles in our sample who visited an FQHC increased from 147,502 in 2007 to 167,825 in 2009. While we observed growth in the number of individuals over age 65 eligible for Medicare and Medicaid, we also observed a very slight decrease in the percentage of such beneficiaries

seeking care in FQHCs, from 12.2% in 2007 to 12.0% in 2009. Similarly, over the study period, the share of dual-eligible FQHC users who are 65 or older decreased slightly from 45.9% to 43.6%, indicating more rapid growth in FQHC use among the younger, disabled population.

Table 2 provides a descriptive comparison of older dual-eligibles by FQHC users and geographically-matched nonusers. While differences in every category are statistically significant at the $p=0.01$ level due to the large sample size, some effects are more meaningful than others. First, FQHC users tend to be a few years younger than nonusers. Second, while most dual-eligibles in both groups live in metropolitan areas, a greater proportion of FQHC users reside in non-metropolitan areas, compared with nonusers. FQHC users are also more likely than nonusers to live in the Northeast or West, and less likely to live in the Midwest or South. Third, unadjusted rates of hospitalization and ED use indicate that nonusers are more likely to be hospitalized and users are more likely to visit the ED. For users and nonusers alike, ACS hospital events represent a sizable minority of ED visits and hospitalizations. Finally, race, gender, and the number of chronic conditions appear relatively similar in the two groups.

Tables 3 and 4 present the results of our negative binomial regression models predicting an older dual-eligible's number of ACS hospitalizations and ACS ED visits, respectively, as a function of having ever used an FQHC in the prior year. As shown in Table 3, white FQHC users have 8% more ACS hospitalizations than white nonusers. However, because incidence rate ratios are relative measurements, it is useful to contemplate the predicted count of the outcome. This is especially necessary to interpret the incremental effects when interaction terms are used in nonlinear models. (Ai & Norton, 2003) Using the average of the probabilities method, we present these results in Table 5. For whites, FQHC use is associated with an increase of 10 ACS hospitalizations per thousand persons per year. Taking the interaction terms into account, there is a differential relationship of FQHC use among Blacks and other races. Among Blacks, FQHC use is associated with a decrease of 1 ACS hospitalization per thousand persons per year. Among all other races, FQHC use is associated with an increase of 6 ACS hospitalizations per thousand persons per year.

On average, men have 6% more ACS hospitalizations than women, and each additional year of age is associated with a 1% increase in the expected number of ACS hospitalizations. Among nonusers, Blacks have nearly 18% more ACS hospitalizations than whites, while beneficiaries in the "other" race category have nearly 16% fewer ACS hospitalizations than whites. ACS hospitalizations show a consistent downward trend over the three-year study period. By 2010, the expected number of ACS hospitalizations is 17% lower than it was in 2008, all else being equal. Individuals who were originally eligible for Medicare on the basis of disability and who have now aged into our sample have approximately 22% more ACS hospitalizations than those who are not disabled. Each additional chronic condition a person has is associated with a 50.6% increase in their expected number of ACS hospitalizations, although this assumes equal risk for each of the conditions.

In Table 4, we find that—among whites—any FQHC use is associated with a nearly 26% increase in the expected number of ACS ED visits compared to nonusers. As above, we

calculate the average expected count of ACS ED visits to give a sense of the absolute magnitude of the relationship between FQHC use and ACS ED visits and properly incorporate the interaction terms in this nonlinear model. As shown in Table 5, this translates to the following associations with FQHC use (versus nonuse): Among whites, an increase of 43 ACS ED visits per thousand persons per year; among Blacks, an increase of 24 ACS ED visits per thousand persons per year; and among all other races, an increase of 30 ACS ED visits per thousand persons per year.

While there is no relationship between ACS ED visits and age or gender, race continues to play an important role. Among nonusers, Black race is associated with having nearly 23% more ACS ED visits than whites, while the expected number of visits is 20.3% lower for those in the “other” race category compared to whites. ACS ED visits exhibit the same downward time trend as ACS hospitalizations. All else being held constant, the expected number of ACS ED visits is approximately 10% lower in 2010 than in 2008. Individuals who were originally eligible for Medicare on the basis of disability and who have now aged into our sample have nearly 20% more ACS ED visits than those who are not disabled. Finally, the number of chronic conditions has a similar effect on the expected number of ACS ED visits as on the expected number of ACS hospitalizations. Specifically, each additional chronic condition a person has is associated with a nearly 40% increase in the expected number of ACS ED visits.

Discussion

In this study, we sought to determine the relation between receipt of care at an FQHC and potentially-preventable hospitalizations and ED visits for ambulatory care-sensitive conditions among older dual-eligibles. We hypothesized that FQHC use would be associated with a reduction in ACS hospitalizations and ED visits. However, we found that, among the older dual-eligible population, receipt of care at an FQHC is associated with both an increased number of hospitalizations and ED visits for ACSCs. The only exception was among older Black dual-eligibles, for whom FQHC use was associated with a slight decrease in the expected number of ACS hospitalizations. Our findings contrast sharply with those from a study of Medicaid-only beneficiaries, which found that using an FQHC for 50% or more of their outpatient care reduced the odds of an ACS hospitalization by 20% and reduced the odds of an ACS ED visit by 13%.(Falik et al., 2001) We note, however, that our analyses do not determine what proportion of outpatient care patients in our sample received at an FQHC.

This unexpected finding could be the result of different factors specific to this population. Dual-eligibles over age 65 have substantial health care needs, and many have become Medicaid-eligible only after becoming disabled and spending their assets on long-term care. The limited capacity at many FQHCs may not facilitate continuity of care for a population with frequent physician visits. Similarly, older dual-eligibles often have multiple chronic conditions, and FQHCs’ primary care services may not ensure access to specialists or care coordination among many providers. In short, the services provided by FQHCs may align better with the primary-care needs of the Medicaid-only population than the complex needs of older dual-eligibles.

However, while we found a positive association between the use of FQHCs and rates of preventable hospital-based care among dual-eligibles, we caution that this finding does not necessarily suggest lower quality of care or worse access to care in FQHCs. An alternative explanation is that FQHCs serve a dual-eligible population at higher risk for hospital-based care based on characteristics that we cannot observe. Foremost among these, we speculate, are factors related to social support. It may be the case that dual-eligibles with more adequate social support (e.g., a relative to help them coordinate their care, transport them to their appointments, etc.) will be more likely to utilize more typical sources of primary care, less likely to rely on the ED, and perhaps less likely to be hospitalized for ACSCs. By contrast, dual-eligibles who lack these social supports of their own may find the types of supportive enabling services FQHCs provide to be attractive, and they may find the convenience of the ED attractive for similar reasons (e.g., 24/7 availability, “one-stop shopping” in the event that tests are needed, and the perception that ED physicians are of higher quality). The episodic care they are likely to receive may in turn make them more susceptible to being hospitalized for a potentially preventable condition.

This brings us to our second consideration. Perhaps the key to reducing ACS hospitalizations and ED visits is not just the location of care, but the continuity of care received over time. Our study does not include use of the Part B claims (carrier file) that would permit a more precise measure of FQHC use, such as the proportion of outpatient visits a beneficiary makes to an FQHC versus other providers. Thus, we cannot control for other sources of primary care received by dual-eligibles, and cannot make any conclusions about the use of FQHCs as a usual source of care. Therefore, among our population of FQHC users as we define them, we are likely to have both those who use the FQHC as their medical home and those who use the FQHC sporadically, and it is likely that these subpopulations of FQHC users would experience different rates of ACS hospitalizations and ED visits.

Finally, it may be not only that FQHC patients are heterogeneous, but also that the FQHCs themselves are heterogeneous. Undoubtedly, some FQHCs provide a higher quality of care than others. Perhaps the FQHC users who receive care at these higher quality facilities have lower rates of potentially preventable hospital-based care, while FQHC users at the lower quality facilities have higher rates of the same. By combining all patients into one group of FQHC users, we neglect to account for any facility-specific role in determining our outcomes of interest, and this is something that future research should explore.

Reducing preventable hospitalizations in the dual-eligible population is the focus of a number of programs and payment mechanisms established by the Affordable Care Act, including bundled payments, Accountable Care Organizations (ACOs), the Hospital Readmissions Reduction Program, and demonstration projects overseen by the Federal Coordinated Health Care Office.(Walsh et al., 2012) From a societal perspective, the growing importance of FQHCs in caring for this group of high-utilizers makes them an important part of these care coordination initiatives. Unfortunately, the evidence of higher rates of hospital-based care for ACSCs among the FQHC population may make them unattractive partners for ACOs.(Berwick, 2011)

In some cases, FQHCs have been able to work around this concern, such as the ten Minnesota FQHCs that have established their own ACO.(Schoenherr et al., 2013) To the extent that FQHCs increase potentially preventable hospitalizations or disproportionately serve patients at higher risk for ACS admissions and ED visits, such an ACO faces an obvious downside, but also a large potential upside. If these organizations can successfully marshal their collective resources to improve outpatient services targeted to older dual-eligibles and other high-utilizing patient segments, these organizations have substantial room to reduce hospital-based care. The experience of FQHCs participating in initiatives to improve care for other populations demonstrates FQHCs' potential to advance population health through care coordination.(Cebul, Love, Einstadter, Petruilis, & Corlett, 2015)

Limitations

Our study is subject to some non-trivial limitations. First, there are data limitations relating to our identification of FQHC users, which we raise throughout the discussion in detail. For example, because FQHCs bill Medicare for a visit regardless of what care a patient received, there may be differences in service type for which we cannot account. Similarly, because we lacked access to the 100% carrier file, we were unable to construct our independent variable as a proportion of all primary care visits, precluding us from identifying those for whom an FQHC is their usual source of care. There is also the distinct possibility of selection bias as those choosing to visit an FQHC may differ in important and unobserved ways from those who do not visit an FQHC. However, it is difficult to anticipate the direction of any such bias.

Second, the data for this study are limited to fee-for-service Medicare beneficiaries. Therefore, the results of this study will not necessarily be generalizable to the Medicare managed care population. Third, our data do not allow us to identify whether or not someone is residing in an institution, and it has been established that institutionalized beneficiaries have rates of potentially preventable hospitalization that are nearly ten times higher than the community based population.(Segal et al., 2014) Thus, if receipt of care at an FQHC is negatively associated with residing in an institution, this may introduce some bias resulting in us understating our results. However, more than 75% of dual-eligibles are community-based, so the scope of this problem is likely to be limited. In fact, one recent report indicates that 87% of dual-eligibles are community based.(Neuman, Lyons, Rentas, & Rowland, 2012) Additionally some FQHCs do deliver care to residents of long-term care facilities. Future research should consider merging in claims data from skilled nursing facilities, home health agencies, and hospice to identify individuals who are receiving long-term care, and running analyses similar to those we present here, but stratified by community or institutional place of residence. Finally, while the Medicare claims data contain information on diagnoses that are generally considered potentially preventable causes of hospitalization and ED visits, we lack information on the severity of illness and other factors, which in some cases make it possible that hospitalizations and ED visits are not actually preventable.

Despite these data-driven limitations, we feel that this study makes a valuable contribution to the literature by modeling the patient-level relationship between FQHC use and potentially preventable hospitalizations and ED visits, especially considering that prior published work

in this area has been focused on county-level analyses that may be subject to the ecological fallacy.(Probst et al., 2009; Rust et al., 2009)

Conclusion

This study provides the first empirical evidence of the relationship between receiving care at FQHCs and hospital-based care for ACSCs among older dual-eligibles. We find that FQHC use is associated with a significant increase in rates of hospital-based care for ACSCs, with the exception of ACS hospitalizations among Blacks, which are lower for FQHC users. We also find that the relationship between FQHC use and hospital-based care is stronger for ED visits than hospitalizations. Our findings suggest that before FQHCs are considered further as a potential strategy for improving access to primary care among dual-eligibles, and reducing costly and potentially preventable hospitalization and ED visits, more research is needed to assess the comparative effectiveness of FQHCs compared to other usual sources of primary care. Finally, it is important to explore variation in performance within the health center program and identify organizational factors associated with better primary care for dual-eligibles.

Acknowledgments

The authors would like to thank Fred Ullrich and Jeff Hiris for extensive support with data management and SAS programming.

Source of Funding: This research was supported by NIH grant #L60 MD007506 and Retirement Research Foundation Grant #2012225.

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Table 1

Selection of Study Sample from Older Dual-Eligible Population

	2007	2008	2009	Total Observations
All Beneficiaries Age 65 or Older with 12 months of dual-eligibility, 12 months of Part A and Part B, and no Medicare Advantage FQHC User or Living in PCSA with FQHC Meet Sample Criteria in Follow-up Year	3,075,504	2,951,744	2,970,773	9,110,180
	1,522,372	1,586,208	1,681,015	4,789,595
	1,207,763	1,307,371	1,405,780	3,920,914
Missing/unrealistic geography				7,075
Missing/unrealistic sex or age				848
Final Analytic Sample				3,912,991

Note: FQHC = Federally Qualified Health Center; PCSA = Primary Care Service Area

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Table 2

Characteristics of Older Dual-Eligible Federally Qualified Health Center Users and Geographically-Matched Nonusers

	FQHC Users	Nonusers
N (person-years)	470,905	3,442,086
Mean Age, y (SD)	75.38* (7.16)	77.89 (7.77)
% Male	31.75*	29.47
% Metropolitan	70.62*	85.32
Race		
% White	56.01*	57.42
% Black	20.61*	19.03
% Other Race	23.39*	23.54
Region		
% Northeast	18.46*	15.94
% Midwest	13.32*	18.44
% South	35.92*	36.51
% West	32.30*	29.11
% Originally Medicare-Eligible Due to Disability	20.82*	18.14
Mean Number of Chronic Conditions ^I (SD)	4.55* (2.66)	4.92 (2.92)
Mean Number of Annual All-Cause Hospitalizations (SD)	0.42* (1.03)	0.47 (1.09)
Mean Number of Annual Ambulatory Care Sensitive Hospitalizations (SD)	0.10* (0.42)	0.11 (0.44)
Mean Number of Annual Emergency Department Visits (SD)	0.95* (1.97)	0.83 (1.68)
Mean Number of Annual Ambulatory Care Sensitive Emergency Department Visits (SD)	0.18* (0.64)	0.16 (0.56)

^IIncludes a count of 26 different conditions from the Chronic Conditions Data Warehouse.

Note: Differences between FQHC Users and Nonusers were determined by two-sample t-tests for continuous variables and Pearson Chi-Squared tests for categorical variables. A *indicates a statistically significant ($p < 0.01$) difference between groups.

Table 3

Predictors of Ambulatory Care Sensitive Hospitalizations among Older Dual-eligibles

Parameters	Incidence Rate Ratio (Standard Error)
FQHC Use	1.080 *** (0.023)
Age	1.010 *** (0.002)
Male	1.058 *** (0.011)
Black	1.178 *** (0.037)
Other Race	0.844 *** (0.025)
FQHC Use x Black	0.926 * (0.029)
FQHC Use x Other Race	1.005 (0.023)
Year 2009	0.898 *** (0.006)
Year 2010	0.828 *** (0.008)
Originally Medicare-Eligible Due to Disability	1.219 *** (0.023)
Number of Chronic Conditions	1.506 *** (0.004)
Constant	0.003 *** (0.0004)
Person-Year Observations	3,912,991

*
p<.05;**
p<.01;***
p<.001

Note: FQHC = Federally Qualified Health Center

Table 4

Predictors of Ambulatory Care Sensitive Emergency Department Visits among Older Dual-eligibles

Parameters	Incidence Rate Ratio (Standard Error)
FQHC Use	1.255 *** (0.025)
Age	1.002 (0.001)
Male	1.005 (0.011)
Black	1.229 *** (0.029)
Other Race	0.797 *** (0.021)
FQHC Use x Black	0.892 *** (0.027)
FQHC Use x Other Race	1.033 (0.037)
Year 2009	0.932 *** (0.006)
Year 2010	0.899 *** (0.007)
Originally Medicare-Eligible Due to Disability	1.199 *** (0.017)
Number of Chronic Conditions	1.397 *** (0.003)
Constant	0.017 *** (0.002)
Person-Year Observations	3,912,991

*
p<.05;**
p<.01;***
p<.001

Note: FQHC = Federally Qualified Health Center

Table 5

Marginal Effects of Federally Qualified Health Center Use on Ambulatory Care Sensitive Hospital Use, by Race/Ethnicity

		Predicted Rates of ACS Hospitalizations (per 1,000 persons)	Predicted Rates of ACS ED Visits (per 1,000 persons)
White	FQHC Users	129	213
	Non-Users	119	170
Black	FQHC Users	136	228
	Non-Users	137	204
Other	FQHC Users	80	130
	Non-Users	74	100

Note: ACS = Ambulatory Care Sensitive; ED = Emergency Department; FQHC = Federally Qualified Health Center

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