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Did you know Medicare does not usually include a dental benefit? Findings from a multisite investigation of oral health literacy

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Abstract

Objectives—Medicare does not usually include a dental benefit. Adults who are unaware of this fact risk unanticipated expenses after retirement. This report will explore the sociodemographic and oral health literacy determinants of this knowledge.

Methods—Data came from the Multi-Site Oral Health Literacy Research Study, a survey of patients presenting to two university dental clinics. Sociodemographic descriptors included age, sex, race/ethnicity, education level, and dental insurance status. Oral health literacy was measured by the Rapid Estimate of Adult Literacy in Medicine and Dentistry (REALM-D).

Results—Only 34 percent of respondents knew the correct answer to the Medicare question. Knowledge was significantly associated with age, race/ethnicity, education level (bivariate only), and REALM-D score.

Conclusions—Policymakers and those assisting in Medicare enrollment should ensure information regarding dental coverage is communicated in ways that individuals of varying literacy, language, and culture understand what is necessary to make appropriate decisions.

Keywords

adult; health knowledge; attitudes; practice; health literacy; health surveys; insurance; dental; Medicare; oral health

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Introduction

According to the US Census Bureau (1), the proportion of seniors aged 65 years and older will surge to 20.3 percent by 2030. Concerns have been raised about the burden that these changing demographics will have on senior entitlement programs (2,3). Medicare, the federally funded health insurance program for older adults, contains several components designed to address the overall healthcare needs of seniors. However, Medicare does not usually provide dental coverage (4).

Concerns have also been raised about low levels of health literacy in the United States, especially given that seniors are more likely to have limited literacy skills. Health literacy is, “the degree to which individuals have the capacity to obtain, process, and understand basic health information and services needed to make appropriate health decisions” (5). Recent national estimates revealed that 36 percent of all adults and about 60 percent of seniors were likely to have limited skills (6), suggesting that they would likely struggle with the demands of the complicated US healthcare system.

As the relative proportion of older adults increases, a number of interrelated issues will become increasingly relevant: a) enrollment in Medicare will rise dramatically; b) the prevalence of low health literacy is higher among seniors (6); and c) adults facing retirement who are unaware of Medicare’s lack of dental coverage may be in for an unpleasant surprise. As the definition of health literacy states, understanding information is at the center of reasonable decision-making. Knowing Medicare does not provide a dental benefit after retirement is essential information that should be understood by all adults, particularly those approaching retirement age. The purpose of this focused investigation is to describe what a sample of dental patients knows about Medicare’s lack of a dental benefit. Analyses will explore the extent to which knowledge is related to selected sociodemographic characteristics and oral health literacy (OHL), the discipline-specific form of health literacy. Findings will be useful to policymakers who must balance the changing demographic landscape against the OHL demands of the population.

Methods

Data for this analysis came from the *Multi-Site Oral Health Literacy Research Study* (MOHLRS), a federally-funded investigation of the relationships between OHL and oral health. A convenience sample of English-speaking, initial care-seeking, adult patients presenting to either of two university-affiliated dental clinics in Southern California and Maryland was recruited. A 40-minute survey included several sections, including oral health knowledge and other relevant areas. A detailed description of the MOHLRS is available elsewhere (7).

The primary outcome variable, knowledge of Medicare’s lack of a dental benefit, came from an item that read,

Some older adults have Medicare insurance. Does Medicare usually cover dental care for older adults?

Responses were coded: “yes,” “no” (the correct answer), and “don’t know.” We chose to leave the “don’t know” response available during analysis because its proportion was relatively high and we thought responding incorrectly (“yes”) was sufficiently different from admitting lack of knowledge (“don’t know”).

Descriptor variables included age, gender, race/ethnicity, education level, dental insurance status, and OHL level. OHL was assessed by the *Rapid Estimate of Adult Literacy in Medicine and Dentistry* (REALM-D) (8), a validated instrument that uses word recognition as the basis for assessing both general and oral health-related literacy. It included 84 medical and dental terms arranged in three columns beginning with relatively easy, mono-syllabic terms (e.g., fat, flu, teeth) and proceeding through increasingly complex, multisyllabic words (e.g., diabetes, periodontitis). Scores were divided into three categories based on tertile cut-points.

SAS for Windows (Version 9.3; Cary NC, 2002–2010) was used for analysis. Bivariate and multivariable relationships were tested using multinomial logistic regression, a statistical method that allows descriptor variables to be regressed against an outcome variable with more than two categories. Study methods were approved by the institutional review boards at the authors’ respective universities.

Results

Table 1 shows that only 33.7 percent of the study sample correctly knew that Medicare does not usually provide a dental benefit. At the bivariate level, responses to the Medicare question were significantly associated with age, race/ethnicity, education level, and REALM-D score. Responses were associated with neither gender nor dental insurance status. Only about 21 percent of young adults (18–24 years) answered the Medicare coverage question correctly compared with 73 percent of older adults (65 years and older). The race/ethnicity and education level variables also exhibited notable variability. Non-Hispanic whites were most likely to provide the correct answer whereas non-Hispanic Asians, non-Hispanic others, and Hispanics were less likely by at least 15 percentage points. For education, almost 20 percentage points separated those with less than a high school education from those with a college degree.

The REALM-D variable exhibited very little range in the proportion of correct responses across categories (32.8–34.5 percent). However, the spread of proportions for being incorrect (that is, giving a “yes” answer to the Medicare question) was rather wide. A little more than 33 percent of adults with low health literacy were incorrect compared with only 19 percent of those with a high REALM-D score.

Table 2 shows the results of adjusted multinomial logistic regression analysis. The regression coefficients revealed that age, race/ethnicity, and REALM-D score remained statistically significant, controlling for all other variables/covariates (age, sex, race/ethnicity, education level, dental insurance status, and REALM-D score) in the model. Education level, became not significant in the adjusted model. For age, individuals aged 18–24, 25–44, and 45–64 were each more likely to be incorrect (“yes” answer to question) and to report not

knowing the correct answer (“don’t know” answer to question) compared with adults in the oldest age group. Hispanics were significantly more likely to be incorrect (“yes”) and to report not knowing (“don’t know”) compared with the reference non-Hispanic white group. For OHL, individuals in the low and middle REALM-D categories were both significantly less likely to report not knowing the answer (“don’t know”) compared with the high-category group. However, there were no significant differences across REALM-D categories in terms of being incorrect (“yes”).

Discussion

Considering the three statistically significant determinants of having correct knowledge in this investigation, the age relationship was the least surprising. The group with the highest level of knowledge, those aged 65 years and older, were probably more likely to know the correct answer because they were already receiving Medicare and were aware of their benefits. As age increased, correct knowledge also increased, suggesting that as adults approached retirement age they became more aware of coverage details under Medicare. However, despite a general increase in knowledge across age categories, senior adults were still more than twice as likely to be correct than any other age group.

The relationship between race/ethnicity and correct knowledge was probably driven primarily by culture. Bivariate analyses showed that both non-Hispanic blacks and Hispanics were significantly less likely to be correct than were non-Hispanic whites. However, adjusted analyses revealed that only Hispanics remained significantly more likely to be incorrect after controlling for the other variables in the model. Given that only English-speaking individuals were included in MOHLRS, the difference between non-Hispanic whites and Hispanics was probably not related solely to language abilities. Future studies will need to explore why ethnicity was more important in this particular context than race.

OHL skill level did not directly influence the proportion of adults who were correct; that is, regardless of REALM-D category, about one-third of respondents knew the correct answer. However, higher REALM-D scores were associated with a corresponding increase in the prevalence of “don’t know” responses. One explanation for this finding is that perhaps adults with high OHL skills felt more comfortable admitting lack of understanding than those with low skills. Regardless of the explanation, the *Clear Communications* framework developed by the Office of Communications and Public Liaison at the National Institutes of Health (9) provides useful guidelines for communicating effectively with individuals of all backgrounds and abilities.

The present investigation had three limitations. First, findings were not generalizable to those who seek dental care outside of a university-based dental environment. It is possible that adults who attend private practices might exhibit different levels of understanding regarding Medicare coverage. Second, findings did not reflect the health literacy levels of persons whose primary language is not English. Although we presume that non-English speakers had similar levels of knowledge as the individuals in our investigation, it is possible that knowledge was influenced by language. Third, the results of our investigation might have differed if other OHL instruments (not included in the MOHLRS) had been used.

Although a limited number of services associated with inpatient and/or emergency care may be available through Medicare (such as extraction of a tooth traumatized during an automobile accident) (4), these services are not considered routine. Dental benefits may also be made available to seniors through private, add-on insurance programs (e.g., Medicare Advantage plans), but these benefits come with increased cost to the consumer and are not a component of the basic Medicare program (4).

There is a growing discussion in the United States about adding adequate dental coverage to Medicare. Until this happens, adults need to be informed about additional costs they might face after retirement so they can prepare and make appropriate decisions regarding their coverage and care (10). Given the relationships identified in this investigation, policymakers and those facilitating Medicare enrollment need to pay particular attention to the type of messaging that is used about Medicare dental coverage to ensure that persons with different sociodemographic backgrounds and OHL skill levels are able to understand what they need to know in order to meet their oral health needs. Otherwise, the oral health of a growing segment of the US population may deteriorate, moving forward.

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Table 1 Responses to Medicare Question, by Selected Characteristics ($n=901$)

Characteristic	Does Medicare usually include a dental benefit?		
	Yes (incorrect)	No (correct)	Do not know
<i>Frequency (percentage)</i>			
Overall	243 (27.0)	304 (33.7)	354 (39.3)
Age			
18–24	29 (40.3)	15 (20.8)	28 (38.9)
25–44	106 (33.5)	73 (23.0)	138 (43.5)
45–64	96 (24.2)	131 (33.1)	169 (42.7)
65 and older	12 (10.3)	85 (73.3)	19 (16.4)
Gender			
Male	115 (26.0)	146 (33.0)	182 (41.0)
Female	128 (27.9)	158 (34.5)	172 (37.6)
Race/ethnicity			
Non-Hispanic white	81 (23.5)	143 (41.6)	120 (34.9)
Non-Hispanic black	90 (27.5)	104 (31.8)	133 (40.7)
Non-Hispanic Asian	9 (23.1)	10 (25.6)	20 (51.3)
Non-Hispanic other	23 (34.3)	17 (25.4)	27 (40.3)
Hispanic	40 (32.3)	30 (24.2)	54 (43.5)
Education level			
Less than 12 years	24 (33.3)	15 (20.8)	33 (45.9)
12 years or GED	65 (28.4)	74 (32.3)	90 (39.3)
Some college	76 (27.5)	89 (32.3)	111 (40.2)
College graduate	78 (24.1)	126 (38.9)	120 (37.0)
Dental insurance status			
Insured	102 (29.7)	105 (30.5)	137 (39.8)
Uninsured	141 (25.3)	199 (35.7)	217 (39.0)
REALM-D score			
Low	90 (33.2)	91 (33.6)	90 (33.2)
Middle	105 (27.6)	131 (34.5)	144 (37.9)
High	48 (19.2)	82 (32.8)	120 (48.0)

Statistically significant bivariate associations ($P < 0.05$) listed in **bold**.

Source: Multisite Oral Health Literacy Research Study (MOHLRS).

Table 2

Adjusted Multinomial Logistic Regression ^{*} Estimates for Responses to the Medicare Question, by Selected Variables ($n = 901$)

Characteristic	Category [†]	Odds ratio (95%CI)
Age (compared with 65 and older)		
18–24	Yes (incorrect)	12.6 (5.2–30.6)
	Do not know	7.7 (3.4–17.4)
25–44	Yes (incorrect)	9.8 (5.0–19.4)
	Do not know	8.6 (4.8–15.4)
45–64	Yes (incorrect)	5.0 (2.6–9.7)
	Do not know	5.9 (3.4–10.4)
Race/ethnicity (compared with non-Hispanic white)		
Non-Hispanic black	Yes (incorrect)	1.4 (0.9–2.2)
	Don't know	1.5 (1.0–2.2)
Non-Hispanic other	Yes (incorrect)	2.1 (1.1–4.4)
	Don't know	1.9 (0.9–3.8)
Hispanic	Yes (incorrect)	2.0 (1.1–3.5)
	Don't know	2.3 (1.3–4.0)
REALM-D scores (compared with high)		
Low	Yes (incorrect)	1.3 (0.8–2.2)
	Don't know	0.5 (0.3–0.8)
Middle	Yes (incorrect)	1.2 (0.7–1.8)
	Don't know	0.6 (0.4–0.9)

Note: For efficiency, only statistically significant ($P < 0.05$) multivariable associations between variables are listed. Significant category-specific associations are highlighted in **bold**.

Source: Multisite Oral Health Literacy Research Study (MOHLRS).

^{*}Controlling for age, sex, race/ethnicity, education level, dental insurance status, and REALM-D score.

[†]Reference category is “no” (correct).