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Extended smoking cessation counseling service utilization in the Medicare population 2012–2014



Cigarette smoking is the leading preventable cause of death and a major risk factor for the development and exacerbation of asthma.¹ Clinicians have the opportunity to dramatically improve their patient's health, quality of life, and longevity by engaging in smoking cessation efforts.² Provider counseling on smoking cessation increases rates of success.³ Counseling is increasingly important as novel nicotine-containing products appear in the marketplace.⁴

In 2008, the Centers for Medicare and Medicaid Services introduced new Current Procedural Terminology (CPT) codes that have enabled health-care providers to receive reimbursement for smoking cessation efforts. Two codes are offered based on time devoted to counseling: "Smoking and tobacco use cessation counseling visit, intermediate, greater than 3 minutes up to 10 minutes" (99406); and "Smoking and tobacco-use cessation counseling visit, intensive, greater than 10 minutes" (99407). However, information regarding the extent of utilization of these codes is lacking.

We evaluated the utilization of smoking cessation codes in the United States (US) Medicare population from 2012 to 2014, using the Medicare Provider Utilization and Payment Data: Physician and Other Supplier Public Use File (Medicare Provider Utilization PUF), which contains reimbursement data for distinct providers and different types of services.⁵ This methodology has recently been published.⁶ We filtered each year's database using the CPT codes related to smoking cessation counseling (99406 and 99407), and merged results from the 3 years into a single database.

The number of services per beneficiary was calculated by an investigator (A.S.N.) by dividing the total number of services by total number of beneficiaries. Descriptive statistics were used to describe the total number of services and average number of services provided each year. Student's *t* tests were used to look for statistically significant differences in year over year utilization data. Statistical significance was set at $P < .05$. Excel 2010 (Microsoft, Redmond, Washington) and JMP version 10.0 (SAS Institute, Inc, Cary, North Carolina) were used in our analysis.⁷

There were 19,110 providers reimbursed for Intermediate Cessation Service (99406) and 2,860 for Intensive Cessation Service (99407) from 2012 to 2014. For code 99406, the average number of services reimbursed during the study period was 40.4 (SD, 58.8), with a calculated 1.37 services per beneficiary. An average of 49.5 (SD, 80.7) services were reimbursed for code 99407, with an average number of services per beneficiary of 1.48 (SD, 0.64). The average amount allowed by Medicare for codes 99406 and 99407 was \$13.18

(SD, 1.41) and \$26.58 (SD, 2.20), respectively. The average amount paid by Medicare was \$9.47 (SD, 1.41) for 99406 and \$19.63 (2.47) for 99407.

In the analysis of year over year differences, there was a statistically significant increase in the average number of services per beneficiary from 2012 to 2014 for 99406 but not 99407. There was also a statistically significant increase in the average amount Medicare allowed for 99406 and 99407, but not in the amount ultimately paid for these services (Table 1).

Smoking cessation is important for the well-being of all patients, especially those with comorbidities such as asthma. Sands, examining the utilization of smoking cessation counseling CPT codes in the Medicare population, demonstrated that health-care providers infrequently seek reimbursement for these services.¹ There are approximately 55 million Medicare beneficiaries in the US, of whom an estimated 12.5%, or 6.8 million, currently smoke. It was shown that only approximately 45,000 beneficiaries were receiving extended cessation counseling based on billing each year, which is less than 1% of the beneficiaries who smoke.^{8,9}

The Medicare Provider Utilization PUF captures a national picture of the utilization of extended smoking cessation services. It is possible that Medicare beneficiaries receive adequate smoking cessation counseling as part of their visit and only a small portion of beneficiaries receive extended services. Some data suggest that physicians, although valuing smoking cessation, have low levels of confidence that smoking cessation is helpful for patients.¹⁰ In addition, this analysis is limited by the incomplete nature of the claims database. The Medicare Provider Utilization PUF, although nationally representative, only captures the Medicare population (>65 years old and/or disabled) and does not reflect the entire population. Providers may assess Medicare patients to have fixed beliefs related to smoking due to duration of use, and thus less likely to benefit from cessation efforts. Smoking cessation codes 99406 and 99407 are able to be submitted to private insurance plans, but coverage and maximum benefits vary by plan. An analysis of the private insurance claims database of these codes is needed to confirm generalizability to the entire US population.

There are several possible explanations why providers may complete smoking cessation counseling yet not capture the service with billing codes. Providers may be unaware these codes are available for billing due to lack of effective coding or practice management training. In addition, reimbursement rates for this time-based service may be considered inadequate for the provider to spend the clinical time required. Our analysis has shown that the total reimbursement from Medicare for this procedure is less than \$20 and has not increased significantly over time. From a physician compensation standpoint, the work relative value units for 99406 and

Table 1

Trends in Utilization in Extended Tobacco Cessation Codes in the Medicare Population Between 2012 and 2014

	2012	2013	2014	P value
CPT code 99406				
Services submitted per year	248,369	260,099	264,372	
Beneficiaries seen by providers	48,267	48,197	45,285	
Number of beneficiaries	26.9 (24.9)	27.1 (25.1)	26.9 (25.8)	0.924
Number of services	39.3 (54.7)	40.7 (56.0)	41.2 (64.2)	0.068
Number of services/beneficiary	1.35 (0.45)	1.38 (0.51)	1.39 (0.52)	<0.01
Average Medicare allowed	\$12.94 (1.39)	\$13.27 (1.42)	\$13.34 (1.36)	<0.01
Average Medicare payment	\$9.47 (1.40)	\$9.45 (1.42)	\$9.50 (1.42)	0.2431
CPT code 99407				
Services submitted per year	169,831	173,315	172,222	
Beneficiaries seen by providers	28,762	28,495	27,726	
Number of beneficiaries	29.4 (34.1)	30.6 (35.3)	29.2 (33.2)	0.8858
Number of services	49.4 (84.2)	51.7 (87.3)	47.7 (69.6)	0.6469
Number of services/beneficiary	1.46 (0.61)	1.49 (0.65)	1.50 (0.68)	0.1619
Average Medicare allowed	\$26.23 (2.03)	\$26.39 (2.19)	\$27.14 (2.28)	<0.001
Average Medicare payment	\$19.70 (2.39)	\$19.31 (2.47)	\$19.90 (2.50)	0.068

Abbreviation: CPT, Current Procedural Terminology.

Data presented as mean (SD) for numbers or United States Dollar (\$).

99407 are 0.24 and 0.50, respectively. These time-based codes require face-to-face time with the patient and do not account for the total time required to complete documentation. For comparison, the work relative value units for established visits of level 2 (99212) and level 3 (99213) are 0.48 and 0.97, respectively. When considering the lower reimbursement for smoking cessation compared to similarly timed services, there may be an economic disincentive to providing or seeking reimbursement for this service.

This analysis has shown that extended smoking cessation counseling billing codes are utilized at a low rate in the Medicare population. There is a potential gap in care for Medicare patients who smoke and would benefit from these services. Further work is needed to understand the most effective methods for providing cessation support to patients (ie, 1-on-1 counseling, group counseling, or electronic support). Ensuring that economic incentives are appropriately aligned should be a priority.

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