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### Trends in Medicare utilization and reimbursement for electronic brachytherapy following 2016 billing code changes



*To the Editor:* Electronic brachytherapy (EBT) has emerged in the last decade as a nonsurgical treatment option for nonmelanoma skin cancer. Prior studies documented a sharp increase in the use of EBT from 2012 to 2015.<sup>1,2</sup> Before 2016, EBT was billed under the 0182T Healthcare Common Procedure Coding System (HCPCS) billing code, regardless of anatomic location. However, in 2016, the Centers for Medicare & Medicaid Services replaced the 0182T code with 2 new billing codes: 0394T (skin sites) and 0395T (nonskin sites). The aim of this study is to characterize trends in use of and Medicare expenditure on EBT after replacement of the 0182T code.

The Medicare Physician and Other Supplier Public Use File (POSPUF) provides reimbursement and use data on all services and procedures provided to Medicare fee-for-service beneficiaries.<sup>3</sup> Using the

Medicare POSPUF, we aggregated the volume of services, average Medicare reimbursement, and the number of providers for the HCPCS billing codes 0182T, 0394T, and 0395T from 2012 to 2017. For each billing code, we estimated total Medicare expenditure by multiplying the average reimbursement by the volume of services. We restricted our analysis to physician office claims, because physician offices accounted for more than 99% of EBT claims.<sup>1</sup>

The volume of EBT administrations increased 978%, from 4611 in 2012 to 49,684 in 2015. During this time period, average Medicare reimbursement was \$1,673.58 per administration in 2012 and \$1,380.73 in 2015. From 2012 to 2015, total annual Medicare expenditure on EBT increased 807%, from \$9,648,655 to \$87,590,904, with a peak of \$121,579,588 in 2014. Over this time period, the number of providers filing claims for EBT increased 872%, from 25 to 243 (Table I).

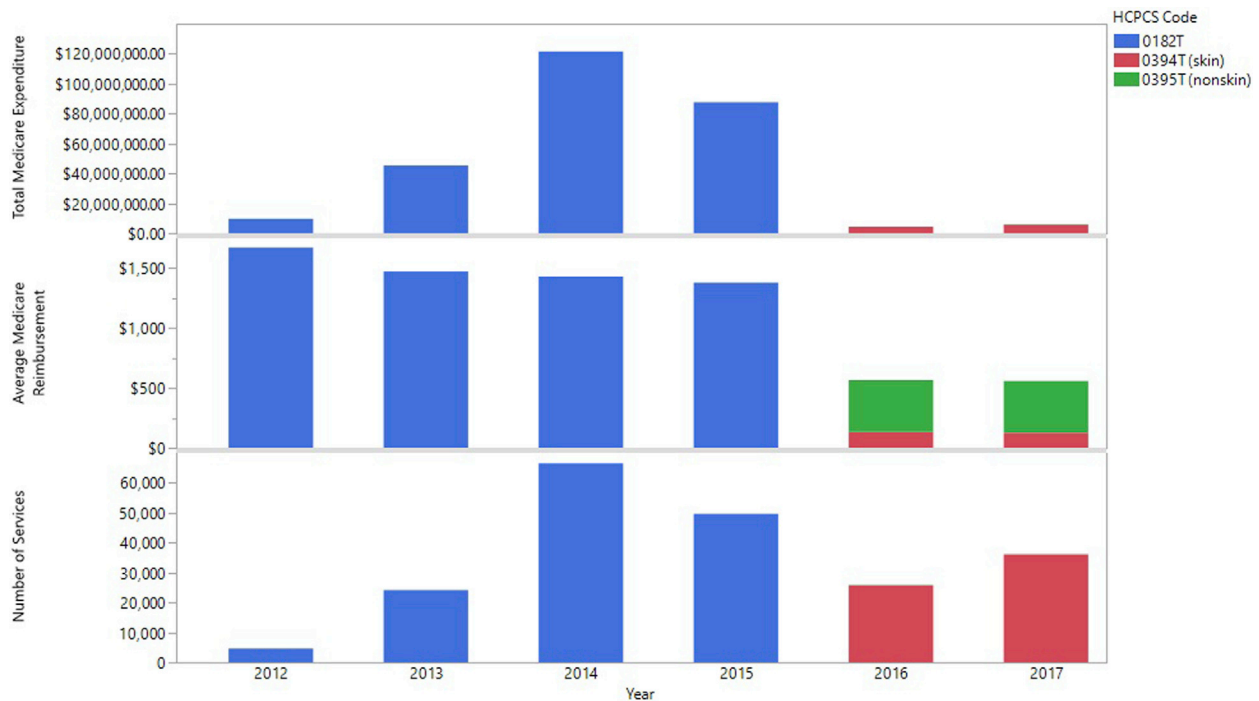
After the HCPCS billing code 0182T was replaced by 0394T (skin) and 0395T (nonskin) in 2016, the average Medicare reimbursement for EBT administration on skin sites decreased 90%, to \$132.96. Concurrently, the overall volume of EBT administrations (volume of 0394T plus volume of 0395T) decreased 48%, from 49,684 in 2015 to 25,866 in 2016. In 2016, 25,811 of 25,866 (99.7%) total EBT administrations were administered on skin sites, and in 2017, 36,111 of 36,169 (99.8%) were on skin sites. As a result, total annual Medicare expenditure on EBT (expenditure on 0394T plus expenditure on 0395T) decreased 95%, from \$87,590,904 in 2015 to \$4,415,809 in 2016 (Fig 1).

Our study is the first to show more than \$80 million in Medicare cost savings after the 90% decline in physician reimbursement rate associated with replacement of the 0182T EBT billing code. The American Society of Radiation Oncology and American Brachytherapy Society recently cautioned against the use of EBT, citing uncertainty over efficacy and safety.<sup>4,5</sup> Therefore, our results suggest that the steep reduction of EBT use in 2016 may have

**Table I.** Electronic brachytherapy services and expenditures, 2012-2017

Year	HCPCS code	Number of services	Number of providers	Average Medicare payment amount	Total Medicare expenditure
2012	0182T	4611	25	\$1673.58	\$9,648,655.83
2013	0182T	24,126	91	\$1473.49	\$45,266,407.50
2014	0182T	66,577	193	\$1430.10	\$121,579,588.55
2015	0182T	49,684	243	\$1380.73	\$87,590,904.64
2016	0394T (skin)	25,811	106	\$132.96	\$4,385,030.79
2016	0395T (nonskin)	55	12	\$432.59	\$30,778.55
2017	0394T (skin)	36,111	121	\$127.55	\$5,945,315.04
2017	0395T (nonskin)	58	10	\$431.15	\$32,196.96

HCPCS, Healthcare Common Procedure Coding System.



**Fig 1.** Trends in EBT use, reimbursement, and total Medicare expenditure, 2012-2017. *EBT*, Electronic brachytherapy.

resulted from uncertainty over clinical efficacy as well as markedly lower Medicare reimbursement rates. Limitations of this study include its retrospective design, use of claims data, and lack of correlation with clinical outcomes. Future studies should evaluate EBT in controlled, prospective trials to better assess clinical outcomes and inform cost-effectiveness analyses.

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#### Serologic characterization of anti-p200 pemphigoid: Epitope spreading as a common phenomenon



*To the Editor:* Anti-p200 pemphigoid is an autoimmune blistering disease characterized by circulating autoantibodies binding to the dermal side of human salt-split skin (SSS) by indirect immunofluorescence (IIF) microscopy and reactivity against a 200-kDa