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Adoption of Medicare's Transitional Care Management and Chronic Care Management Codes in Primary Care

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To enhance compensation for primary care activities that occur outside of face-to-face visits, Medicare recently began reimbursing for "transitional care management" (TCM) and "chronic care management" (CCM) services.[1–3] TCM is designed to facilitate the transition from hospital to home and involves a dedicated office visit after hospital discharge as well as additional care coordination. CCM is a comprehensive set of care coordination services provided monthly to patients with chronic illnesses. We examined the uptake of TCM and CCM nationally.

Methods

We analyzed Medicare claims data from 2012 through 2016 for a random 20% sample of fee-for-service beneficiaries. Beginning with the first year of each of their implementations, we identified TCM claims (2013–2016) using Current Procedural Technology codes 99495 or 99496, and CCM claims (2015–2016) using the code 99490. We used taxpayer identification numbers, which represent billing entities in Medicare claims, to identify distinct practices. We assigned beneficiaries to the practice that billed for the plurality of evaluation and management services during the year prior to the delivery of a TCM service or during the calendar year of a CCM service.[4] We measured the proportion of eligible beneficiaries for whom practices billed each service and examined earnings from TCM and CCM by practice. Analyses were conducted using SAS (SAS Institute) version 9.4. This study was approved by the Office of Research Protection at Harvard Medical School. Informed consent was waived.

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Author Contributions: Dr. Agarwal and Mr. Souza had full access to all the data in the study and take responsibility for the integrity of the data and the accuracy of the data analysis.

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Results

In 2016, of 7,215,112 beneficiaries from the 20% random sample, there were 181,900 claims for TCM among 151,298 beneficiaries (9.3% [95% CI, 9.3%–9.4%] of those eligible, increasing from 3.7% [95% CI, 3.7%–3.7%] in 2013), and there were 474,192 claims for CCM among 110,197 beneficiaries (2.3% [95% CI, 2.3%–2.3%], increasing from 1.2% [95% CI, 1.2%–1.2%] in 2015) (Table 1). On average, a CCM-recipient received 4.3 months of CCM services. Nationally, 10,384 practices with any primary care physicians (21.5% [95% CI, 21.2%–21.9%]) billed for any TCM service and 3,347 (6.9% [95% CI, 6.7% –7.2%]) billed for any CCM service.

Among TCM-billing practices, the median practice provided TCMs for 12.3% (IQR 5.6–22.9) of eligible discharges, and among CCM-billing practices, the median practice provided CCMs for 14.7% (IQR 3.0–40.0) of eligible patients. The median practice earned $904 (IQR 366–2,256) by billing for TCM services and $981 (IQR 215–3,873) for CCM services, equating to approximately $4,520 and $4,905 respectively in additional revenue per practice, or less than $2,000 per physician, when considering all Medicare beneficiaries (Table 2).

Discussion

The adoption of TCM and CCM has been low at both the beneficiary and practice levels, and even within practices that did attempt to provide these services. The allowable reimbursement associated with these new codes may be too low relative to the high cost of implementing and maintaining these services. The reimbursement rate of CCM is only $43, and although the reimbursement rate of TCM is higher than that of the comparable evaluation and management visit ($166 versus $109, respectively, in 2016), the marginal difference may not be sufficient to cover the additional components of TCM.[5] Also, prior to realizing any additional revenue, many of these codes require practices to restructure and invest substantial resources (e.g. hiring non-physician staff) to support the delivery of these services, meet the many requirements for billing these codes, and ensure compliance. Cash-strapped primary care practices might not be willing or able to make such upfront investments. A modeling study of CCM estimated that over one-hundred Medicare patients would need to be consistently enrolled to recoup the salary of one full-time registered nurse to provide CCM services.[6] Very few practices attained this level of enrollment. In the absence of initiatives to promote their use, the introduction of reimbursable codes covering non-visit-based services may have limited influence in changing practice patterns or infusing primary care with additional resources.

The study has several limitations. Using claims data may have overestimated the population potentially eligible to receive TCM or CCM services, and taxpayer identification numbers do not always identify individual practices. Additional research is needed to understand whether these additional billing codes meaningfully affect patient outcomes.

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Table 1.

Overview of TCM and CCM, 2013–2016 [a]

	TCM				CCM	
	2013 (N = 7,091,497 beneficiaries) [b]	**2014 (N = 7,138,660 beneficiaries) [b]**	**2015 (N = 7,142,939 beneficiaries) [b]**	**2016 (N = 7,215,112 beneficiaries) [b]**	**2015 (N = 7,142,939 beneficiaries) [b]**	**2016 (N = 7,215,112 beneficiaries) [b]**
Beneficiary level characteristics						
Number of potentially eligible beneficiaries [c]	1,598,735	1,583,548	1,612,787	1,625,918	4,691,046	4,746,154
Total number of TCM or CCM claims [d]	78,703	105,864	138,574	181,900	190,767	474,192
Number of beneficiaries who received TCM or CCM (% of eligible, [95% CI]) [d]	58,909 (3.7%, [3.7%–3.7%])	89,194 (5.6%, [5.6%–5.7%])	115,888 (7.2%, [7.1%–7.2%])	151,298 (9.3%, [9.3%–9.4%])	56,875 (1.2%, [1.2%–1.2%])	110,197 (2.3%, [2.3%–2.3%])
Mean claims per beneficiary (SD)	-	-	-	-	3.4 (2.7)	4.3 (3.3)
Practice level characteristics						
Office-based practices [e]						
Total	161,159	156,631	151,901	146,069	151,901	146,069
Number that billed for TCM or CCM (%, [95% CI])	8,262 (5.1%, [5.0%–5.2%])	8,747 (5.6%, [5.5%–5.7%])	9,787 (6.4%, [6.3%6.6%])	11,379 (7.8%, [7.7%–7.9%])	2,411 (1.6%, [1.5%–1.7%])	3,799 (2.6%, [2.5%–2.7%])
Office-based practices with any primary care [f]						
Total	54,307	52,608	50,568	48,231	50.568	48,321
Number that billed for TCM or CCM (%, [95% CI])	7,649 (14.1%, [13.8%–14.4%])	8,041 (15.3%, [15.0%–15.6%])	8,984 (17.8%, [17.4%–18.1%])	10,384 (21.5%, [21.2%–21.9%])	2,139 (4.2%, [4.1%–4.4%])	3,347 (6.9%, [6.7%–7.2%])

Abbreviation: TCM, transitional care management; CCM, chronic care management

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[a]Results based on a 20% random sample of Medicare beneficiaries.

[b]N includes beneficiaries 18 years of age, without end-stage renal disease, and enrolled in fee-for-service Medicare for at least one month.

[c]Potentially eligible beneficiaries have at least one hospitalization for TCM or at least two chronic conditions for CCM.

[d]Approximately 3–5% of claims and 4–6% of beneficiaries included within these counts did not meet the claims-based eligibility requirements (i.e. hospitalization preceding TCM or at least two chronic diseases for CCM).

[e]Office-based practices were defined as practices with at least five evaluation and management codes.

[f]Office-based practices with any primary care were defined as office-based practices with at least one primary care physician.

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Table 2.

Earnings of TCM- and CCM-adopting practices based on 20% random sample, 2016 [a,b]

Characteristic	TCM (N = 11,531 practices) [c]	CCM (N = 3,936 practices) [c]
Median earnings among practices that engaged in TCM or CCM (25–75 IQR)	$904 (366–2,256)	$981 (215–3,873)
Median earnings, standardized by number of physicians associated with the practice (25–75 IQR)	$369 (153–884)	$358 (64–1,585)

Abbreviation: TCM, transitional care management; CCM, chronic care management; IQR, interquartile range.

[a]Results based on a 20% random sample of Medicare beneficiaries.

[b]Total earnings from TCM or CCM for each individual practice were determined by summing up the allowed amount paid by Medicare and any cost-sharing payments, whether paid for by Medicaid, a supplemental insurer, or out-of-pocket.

[c]N includes office-based and non-office-based practices that delivered TCM or CCM.