

Multimodality Cancer Care and Implications for Episode-Based Payments in Cancer

Suhas Gondi, BA; Alexi A. Wright, MD, MPH; Mary Beth Landrum, PhD; Jose Zubizarreta, PhD; Michael E. Chernew, PhD; and Nancy L. Keating, MD, MPH

Payers are increasingly using episode-based payments to reduce costs and improve quality in several areas, including joint replacements, dialysis, and hospitalizations for certain conditions. In oncology, CMS is implementing the Oncology Care Model, an episode-based alternative payment model for patients receiving chemotherapy.¹ Other proposals for oncology episode-based payment models focus on patients with newly diagnosed cancer who may require surgery, radiation, and/or chemotherapy.²⁻⁴

In models focused on newly diagnosed cancers, episodes are designed based on guideline-recommended treatments for patients with cancers of a certain type and stage. However, the multidisciplinary nature of cancer care creates a challenge in identifying which provider should receive the bundled payment for such episodes. When a patient with cancer receives multimodality care (ie, surgery, radiation, and/or chemotherapy) from different practices, it may not be readily apparent which practice should be held accountable for the costs and quality of care. We examined the prevalence of multimodality care across different practices to better characterize this challenge in colorectal, lung, and breast cancer, 3 of the most frequently diagnosed cancer types.

METHODS

Using Surveillance, Epidemiology, and End Results Medicare data, we identified all fee-for-service Medicare beneficiaries with newly diagnosed colorectal, lung, or breast cancer between 2012 and 2015. For each patient, we used Medicare claims from 2012 to 2016 to identify receipt of surgery, radiation, and chemotherapy within 6 months of diagnosis.

We assigned patients receiving each treatment to the practice (based on Taxpayer Identification Number [TIN]) that submitted the claims for that service in the National Claims History Physician/Supplier file (for surgery, radiation, or chemotherapy) or the Durable Medical Equipment file (for Part B-covered oral chemotherapy).

Among patients who received more than 1 treatment modality, we assessed how often the practice billing for one type of treatment (eg, chemotherapy) was the same as the practice billing for

TAKEAWAY POINTS

- ▶ Many patients with newly diagnosed colorectal, lung, or breast cancer receive multimodality therapy (ie, surgery, chemotherapy, and/or radiation) within 6 months of diagnosis, and few of those patients received the different types of treatments at a single practice.
- ▶ For bundled or episode-based payments to work in cancer care, they must be able to hold multiple distinct providers accountable for costs and quality.

another (eg, surgery). We considered care to be delivered by the same practice if any practice providing one type of treatment also provided another type of treatment.

RESULTS

Among patients newly diagnosed with any stage of colorectal, lung, or breast cancer, the proportions who received multimodality therapy within 6 months of diagnosis were 19.6%, 6.4%, and 16.5%, respectively. Few of these patients received different types of treatment at a single practice. Specifically, of all patients receiving multimodality care for colorectal, lung, and breast cancer, only 5.8%, 17.2%, and 10.7%, respectively, received all of their care from the same practice (Table).

DISCUSSION

Episode-based payments for patients with newly diagnosed cancer offer a promising opportunity to incentivize cost-efficient and coordinated care. Such models are straightforward for cancers requiring only 1 treatment modality (eg, stage 1 colorectal cancer, for which surgery alone is curative); however, episode-based payment models will be more complicated for patients with cancer who require multimodality care, because such care is infrequently provided by physicians billing together under the same TIN. These more complex patients are likely sicker and have higher costs than patients requiring single-modality care and may represent a real

LETTER TO THE EDITOR

TABLE. Receipt of Multimodality Care for Colorectal, Lung, and Breast Cancer From the Same Practice

Treatment Modalities Received	Colorectal		Lung		Breast	
	Patients, n	All Modalities Were Delivered to Patient by the Same Practice, n (%)	Patients, n	All Modalities Were Delivered to Patient by the Same Practice, n (%)	Patients, n	All Modalities Were Delivered to Patient by the Same Practice, n (%)
Surgery + chemotherapy	8697	488 (5.6)	2239	134 (6.0)	6075	650 (10.7)
Surgery + radiation	187	11 (5.9)	235	25 (10.6)	6558	701 (10.7)
Chemotherapy + radiation	571	77 (13.5)	3468	891 (25.7)	53	16 (30.2)
Surgery + chemotherapy + radiation	638	11 (1.7)	213	11 (5.2)	294	25 (8.5)
Total (all patients who received multimodality care)	10,093	587 (5.8)	6155	1061 (17.2)	12,980	1392 (10.7)

opportunity for alternative payment models to drive savings in cancer care. For episode-based payment reform to be successful in oncology, creative approaches are needed that hold multiple distinct providers accountable for costs and quality. ■

Acknowledgments

The authors would like to acknowledge Laurie Meneades for expert programming assistance and Lauren Riedel for research assistance.

Author Affiliations: Department of Health Care Policy, Harvard Medical School (SG, MBL, JZ, MEC), Boston, MA; Division of Population Sciences, Dana-Farber Cancer Institute (AAW), Boston, MA; Division of General Internal Medicine, Brigham and Women's Hospital (NLK), Boston, MA.

Source of Funding: This work was supported by the Laura and John Arnold Foundation. Dr Keating was additionally supported by the National Cancer Institute (K24CA181510).

Author Disclosures: Dr Keating is on the evaluation team for the Oncology Care Model, a CMS alternative payment model. The remaining authors report no relationship or financial interest with any entity that would pose a conflict of interest with the subject matter of this article.

Authorship Information: Concept and design (SG, AAW, MBL, MEC, NLK); acquisition of data (NLK); analysis and interpretation of data (SG, AAW, MBL,

JZ, MEC, NLK); drafting of the manuscript (SG, AAW, NLK); critical revision of the manuscript for important intellectual content (SG, AAW, MBL, JZ, MEC, NLK); statistical analysis (MBL, JZ, MEC, NLK); obtaining funding (NLK); and supervision (NLK).

Address Correspondence to: Nancy L. Keating, MD, MPH, Department of Health Care Policy, Harvard Medical School, 180 Longwood Ave, Boston, MA 02115. Email: keating@hcp.med.harvard.edu.

REFERENCES

1. Oncology Care Model. CMS website. [innovation.cms.gov/initiatives/oncology-care](https://www.cms.gov/initiatives/oncology-care). Updated August 2, 2019. Accessed September 16, 2019.
2. Hackensack Meridian Health; Cota Inc. Proposal for PTAC: oncology bundled payment program using CNA-guided care. Office of the Assistant Secretary for Planning and Evaluation website. [aspe.hhs.gov/system/files/pdf/255906/OncologyBundledPaymentProgramCNAcare.pdf](https://www.aspe.hhs.gov/system/files/pdf/255906/OncologyBundledPaymentProgramCNAcare.pdf). Published March 24, 2017. Accessed September 16, 2019.
3. Large Urology Group Practice Association. LUGPA APM for initial therapy of newly diagnosed patients with organ-confined prostate cancer. Office of the Assistant Secretary for Planning and Evaluation website. [aspe.hhs.gov/system/files/pdf/255906/LUGPAAPM.pdf](https://www.aspe.hhs.gov/system/files/pdf/255906/LUGPAAPM.pdf). Published July 5, 2017. Accessed September 16, 2019.
4. Bach PB, Mirkin JN, Luke JJ. Episode-based payment for cancer care: a proposed pilot for Medicare. *Health Aff (Millwood)*. 2011;30(3):500-509. doi: 10.1377/hlthaff.2010.0752.

Visit ajmc.com/link/4341 to download PDF