

COLLEGE OF POPULATION HEALTH

Performance-based Payment Determination in the Oncology Care Model: Factors Associated with Exceeding Target Price in Prostate Cancer Episodes



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Conflict of Interest Statement

Dexter Waters, MSPH - No conflicts of interest to disclose.

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Oncology Care Model (OCM) Overview

- Advanced Alternative Payment Model by the Center for Medicare and Medicaid Innovation
- Goals:
 - Improve health outcomes
 - Contain costs to Medicare
 - Improve quality of care
- Five-year model (July 1, 2016 - June 30, 2021)
- Currently includes 175 practices and 10 payers
- Total cost of care model
- 6-month episodes following administration of systemic therapy

Aligning Financial Incentives

- Monthly Enhanced Oncology Services Payment
 - \$160/beneficiary/month for duration of episode
 - Provides practices with additional resources for managing and coordinating care
- Performance-Based Payment (PBP)
 - Calculated retrospectively on a semi-annual basis
 - Compares costs from Medicare FFS to Target Price set by CMS

Target Price Calculation (Episode Level)

Baseline episode cost
 x Model overlap adjustment
 x Baseline trend adjustment
 x Prediction model adjustment
 x Practice experience adjustment
 x Trend factor adjustment
 x Novel therapies adjustment
 x 1-OCM Discount

 = Target Price

Performance-Based Payment Calculation (Practice Level)

$PBP = (\text{Target Amount} - \text{Actual Cost of Care}) \times \text{Performance Multiplier}$

Sum of target prices for all episodes

Sum of Medicare FFS costs

Adjustment based on quality measures

- Cost of care and target prices are aggregated within each practice by 6-month Performance Periods
- PBPs disbursed as lump sums by Performance Period, not for individual episodes

OCM Research Considerations

- Unclear whether Target Price calculations adjust adequately for episode characteristics
- Cancer types differ in the products and services typically included in course of care
- Prostate cancer episodes are second-most prevalent in Jefferson OCM; provide a sufficient volume of episodes for analysis
 - Most common non-dermatologic cancer and second-leading cause of cancer death in men
 - Systemic therapies capture both hormone therapies and chemotherapies

Study Objectives

1. To identify prostate cancer episodes characteristics associated with increased cost of care
2. To identify prostate cancer episode characteristics that impact the likelihood of cost of care exceeding target price

Methods

- Population:
 - Prostate cancer episodes initiated between 7/1/2016-7/1/2018 and attributed to Jefferson
- Data:
 - OCM Reconciliation Reports
 - Jefferson electronic medical records

Methods

- Outcomes:
 - Episodic cost of care
 - Episodic cost of care exceeding Target Price
- Variables:
 - Age, cancer stage, hierarchical condition categories, novel therapy, inpatient admission, ED visit, skilled nursing facility, radiation, Part B drugs, Part D, observation stay, ancillary services, home health care, surgery, clinical trial status durable medical equipment, other outpatient facility services, inpatient rehab facility services
- Statistical analysis:
 - Linear regression to evaluate associations between episode characteristics and cost of care
 - Logistic regression to evaluate associations between episode characteristics and exceeding Target Price

Results - Prostate Cancer Episode Characteristics

Episode Characteristic	N (%)	Mean Cost of Care (\$)	Mean Target Price (\$)
Age			
<65	23 (7.6)	35,119	27,168
65-74	153 (50.7)	25,429	21,981
75-84	117 (38.7)	22,910	18,836
≥85	9 (3.0)	21,648	20,759
Cancer Stage			
I	6 (2.0)	15,924	17,157
II	87 (28.8)	18,548	20,568
III	34 (11.3)	28,172	21,628
IV	175 (58.0)	28,038	21,434
Exceed Target Price			
Yes	122 (40.4)	45,471	23,842
No	180 (59.6)	11,257	19,277

Results - Cost of Care

Episode Characteristic	Point Estimate (95% CI)
Novel Therapy	\$21,013 (\$13,697 - \$28,328)
Inpatient Admission	\$15,271 (\$9,721 - \$20,820)
ED Visit	\$6,516 (\$1,262 - \$11,769)
Skilled Nursing Facility	\$24,857 (\$13,290 - \$36,424)
Radiation	\$10,775 (\$6,393 - \$15,156)
Part D	\$16,920 (\$12,616 - \$21,224)
Part B Drug	\$18,444 (\$144 - \$36,744)

Results - Likelihood of Exceeding Target Price

Episode Characteristic	Odds Ratio (95% CI)
Inpatient Admission	10.84 (4.39 - 26.74)
Novel Therapy	3.59 (1.19 - 10.84)
Part D	2.87 (1.52 - 5.39)

Comparison of Statistically Significant Factors

Episode Characteristic	Cost of Care	Exceeding Target Price
Inpatient Admission	X	X
Novel Therapy	X	X
Part D	X	X
ED Visit	X	-
Part B Drug	X	-
Radiation	X	-
Skilled Nursing Facility	X	-

Limitations

- Single institution
- Limited sample size
- Analysis based on CMS claims
- Clustering at patient level

Summary

- Statistically significant factors positively associated with cost of care include novel therapies, inpatient admissions, ED visits, skilled nursing facility placement, radiation therapy, Medicare Part D use, and Medicare Part B drug use
- Statistically significant factors positively associated with cost of care exceeding Target Price include novel therapies, inpatient admission, and Part D use

Conclusion

- Improving certain aspects of care delivery (such as preventing inpatient admissions) may be important for staying below Target Price
- Novel therapies associated with exceeding target price despite being adjusted for in Target Price calculation
 - Replication of findings at other sites may indicate opportunity to better calibrate Target Price calculation methodologies



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