hfma
healthcare financial management association

CMMI Radiation Oncology Model
HFMA Overview

Summary:
On July 10, 2019, The Center for Medicare and Medicaid Innovation (CMMI) proposed a five-year, mandatory episodic payment model for 17 cancer types which make up 84% of cancers (see Appendix I) treated using radiation oncology. The aim of the "Radiation Oncology (RO) Model" is to test whether episode-based payments to physician group practices (PGPs), hospital outpatient departments (HOPD) and freestanding radiation therapy centers for radiotherapy (RT) will reduce Medicare expenditures, while preserving or enhancing the quality of care for Medicare beneficiaries.

The model participants will receive prospective, episode-based payment amounts for RT services furnished during a 90-day episode of care, instead of regular Medicare fee-for-service (FFS) payments throughout the RO model performance period. The RO model would include the following RT modalities: various types of external beam RT, including 3-dimensional conformal radiotherapy (3DCRT), intensity-modulated radiotherapy (IMRT), stereotactic radiosurgery (SRS), stereotactic body radiotherapy (SBRT) and proton beam therapy (PBT); intraoperative radiotherapy (IORT); image-guided radiation therapy (IGRT) and brachytherapy.

The five-year model is currently projected to begin either January 1, 2020, or April 1, 2020, and end December 31, 2024. CMMI estimates the model will save $260 million dollars over its five-year life by impacting approximately 350,000 episodes.

Participation:
The RO model would require participation from RT providers and suppliers that furnish RT services within selected core-based statistical areas (CBSAs). Using randomly selected stratified CBSAs will ensure that the participant and comparison groups of CBSAs would each contain approximately 40% of all eligible episodes nationally. The proposed rule states the CBSA selected for both the participation and comparison groups will be published on the website when the final rule is published.

Most RT providers and RT suppliers may not know in what CBSA they furnish RT services. In order to simplify the notification process to inform RT providers and RT suppliers whether or not they furnish RT services in a selected CBSA, CMS is proposing to use an RT provider's or RT supplier's service location five-digit zip code found on the RT provider's or RT supplier's claim submissions to CMS to link them to CBSAs selected under the RO model. The proposed rule defines a process for handling situations where one zip code sits in multiple CBSAs. This issue impacts approximately 15% of all zip codes.

A RO model participant would be a physician group practice (PGP), freestanding radiation therapy center or hospital outpatient department (HOPD), which would participate in the RO model as a professional participant, technical participant, or dual participant as defined below:

- A professional participant is a Medicare-enrolled PGP, identified by a single Taxpayer Identification Number (TIN) that furnishes only the professional component (PC) of RT services at either a freestanding radiation therapy center or a HOPD.

- A technical participant is a HOPD or freestanding radiation therapy center, identified by a single CMS Certification Number (CCN) or TIN, which furnishes only the technical component (TC) of RT services.
- A dual participant furnishes both the PC and TC of an episode for RT services through a freestanding radiation therapy center, identified by a single TIN.

Payment model:
The RO model includes most RT services furnished in HOPDs or freestanding radiation centers that are part of one of the sub-components of RT therapy which include:

- Consultation
- Treatment planning
- Technical preparation services
- Radiation treatment delivery services (including brachytherapy)
- Treatment management

CMS is not proposing to include evaluation and management (E&M) services in the RO Model. E&M services will be billed separately and paid under FFS. Table two in the proposed rule (included in Appendix II) includes the HCPCS codes considered bundled for an RT episode in the RO Model.

Participant-specific payment amounts will be determined based on national base rates, trend factors and adjustments for each participant's case-mix, historical experience and geographic location. CMS would further adjust payment amounts by applying a discount factor. CMMI will create a set of national base rates for the PC and TC of the included cancer types, yielding 34 different national base rates. Each of the national base rates represents the historical average cost for an episode of care for each of the included cancer types. The calculation of these rates would be based on Medicare FFS claims paid during the calendar years (CYs) 2015-2017 that are included under an episode where the initial treatment planning service occurred during the CYs 2015-2017.

In the first two years of the RO model if a participant has fewer than 60 episodes attributed to it during the initial benchmarking period (2015–2017) and subsequent period (2016–2018) then the RO model participant's participant-specific professional episode payment and technical episode payment amounts would equal the trended national base rates in performance year (PY)1 or PY2.

In PY3-PY5, CMS would reevaluate those same RO model participants as it did in PY2 to determine the number of episodes in the rolling three-year period used in the case-mix adjustment for that PY (for example, PY3 would be 2017-2019). RO model participants that continue to have fewer than 60 attributed episodes in the rolling three-year period used in the case-mix adjustment for that performance year would continue to have participant-specific professional episode payment and technical episode payment amounts that equal the trended national base rates, whereas those that have 60 or more attributed episodes would have participant-specific professional episode payment and technical episode payment amounts that equal the trended national base rates with the case-mix adjustment added.

The discount factor, or the set percentage by which CMS reduces an episode payment amount, would reserve savings for Medicare and reduce beneficiary cost-sharing. The discount factor for the PC would be 4%, and the discount factor for the TC would be 5%. The payment amount would also be adjusted for

withholds for incomplete episodes (2% for PC and TC), quality (2% for PC) and beneficiary experience (1% for TC starting in 2022). RO model participants would have the ability to earn back a portion of the quality and patient experience withholds based on clinical data reporting, quality measure reporting and performance, and the beneficiary-reported Consumer Assessment of Healthcare Providers and Systems (CAHPS®) Cancer Care Radiation Therapy Survey.

Episode payments in the RO model would be split into a PC payment, which is meant to represent payment for the included RT services that may only be furnished by a physician, and the TC payment, which is meant to represent payment for the included RT services that are not furnished by a physician, including the provision of equipment, supplies, personnel and costs related to RT services. This division reflects the fact that RT professional and technical services are sometimes furnished by separate providers or suppliers.

Quality measures/impact on payment:
The RO model will calculate an aggregate quality score (AQS) which will impact payment as described above. Starting in PY1 and continuing thereafter, the AQS will be based on quality measures listed in the table below. The AQS starts with three pay-for-performance measures and two pay-for-reporting. Over time, the number of pay-for-performance measures increases. Three of the four measures proposed are National Quality Forum (NQF)-endorsed process measures that are clinically appropriate for RT and are approved for the Merit-based Incentive Payment System (MIPS).

Radiation Oncology Model Participant Quality Measure,
Clinical Data and Patient Experience Submission Requirements[1]

RO Participant Data Submission Requirements	Level of Reporting	Pay-for Reporting	Pay-for-Performance
Oncology: Medical and Radiation - Plan of Care for Pain- NQF #0383; CMS Quality ID #144	Aggregate	N/A	PYs 1-5
Preventive Care and Screening: Screening for Depression and Follow-Up Plan- NQF #0418; CMS Quality ID #134	Aggregate	N/A	PYs 1-5
Advance Care Plan - NQF #0326; CMS Quality ID #047	Aggregate	N/A	PYs 1-5
Treatment Summary Communication – Radiation Oncology	Aggregate	PYs 1-2	PYs 3-5
CAHPS Cancer Care Survey	Patient Reported	N/A	PYs 3-5
Clinical Data Elements	Beneficiary Level	PYs 1-5	N/A

Quality payment program:
The RO model would be an Advanced Alternative Payment Model (APM) and a Merit-based Incentive Payment System (MIPS) APM for the Quality Payment Program. The RO model would require RO model participants to annually certify their intent to use of Certified Electronic Health Record Technology, include quality measure performance as a factor when determining payments and require RO model participants to bear more than a nominal amount of financial risk. RO model participants who are APM Entities, and eligible clinicians seeking Qualifying APM Participant (QP) status in an Advanced APM, must comply with all RO model requirements in order to be eligible for Advanced APM incentive payments.

[1] Table 7, Proposed Rule, pg 124 - 125; https://www.hhs.gov/sites/default/files/CMS-5527-P.pdf

Participants who do not meet the QP threshold would not qualify for the APM incentive payment, and instead would be in a MIPS APM.

Data sharing:
CMS will collect quality, clinical and administrative data for the RO model. CMMI will provide participants the opportunity to request a claims data file that contains patient-identifiable data on the RO Model participant's patient population for clinical treatment, care management and coordination, and quality improvement activities. CMS also proposes to permit the data to be reused by RO model participants for provider incentive design and implementation, and review of CMS's calculation of participant-specific episode payment amounts and reconciliation payment amounts, or recoupment amounts, as applicable.

Beneficiary impact:
Like other CMMI models, the RO model is limited to only Medicare FFS beneficiaries who are eligible for Parts A and B as their primary payer and receive care from a RO Model provider in one of the selected CBSAs. At the time of their initial treatment planning, any beneficiary enrolled in Medicare Advantage, PACE, not in a Medicare hospice benefit period or covered under United Mine Workers will be excluded from the RO model.

Beneficiaries would still be able to receive care from any provider or supplier of their choice. The same cost-sharing requirement as under the traditional payment systems (i.e., typically 20% of the Medicare-approved amount for services) will apply for beneficiaries receiving RO model services from a model participant; because CMS would be applying a discount to each of these components, beneficiary cost-sharing may be, on average, lower relative to what typically would be paid under traditional Medicare FFS.

Additional information:
CMMI is posting additional materials and webinar opportunities on the model's webpage. It can be accessed at: https://innovation.cms.gov/initiatives/radiation-oncology-model/

Appendix I: Identified Cancer Types and Corresponding ICD-9 and ICD-10 Codes[2]

Cancer Type	ICD-9	ICD-10
Anal Cancer	154.2x, 154.3x	C21.xx
Bladder Cancer	188.xx	C67.xx
Bone Metastases	198.5x	C79.5x
Brain Metastases	198.3x	C79.3x
Breast Cancer	174.xx, 175.xx, 233.0x	C50.xx, D05.xx
Cervical Cancer	180.xx	C53.xx
CNS Tumors	191.xx, 192.0x, 192.1x, 192.2x, 192.3x, 192.8x, 192.9x	C70.xx, C71.xx, C72.xx
Colorectal Cancer	153.xx, 154.0x, 154.1x, 154.8x	C18.xx, C19.xx, C20.xx
Head and Neck Cancer	140.xx, 141.0x, 141.1x, 141.2x, 141.3x, 141.4x, 141.5x, 141.6x, 141.8x, 141.9x, 142.0x, 142.1x, 142.2x, 142.8x, 142.9x, 143.xx,	C00.xx, C01.xx, C02.xx, C03.xx, C04.xx, C05.xx, C06.xx, C07.xx, C08.xx, C09.xx, C10.xx, C11.xx,

[2] Table 1 Proposed Rule, pg 78; https://www.hhs.gov/sites/default/files/CMS-5527-P.pdf

Cancer Type	ICD-9	ICD-10
	144.xx, 145.0x, 145.1x, 145.2x, 145.3x, 145.4x, 145.5x, 145.6x, 145.8x, 145.9x, 146.0x, 146.1x, 146.2x, 146.3x, 146.4x, 146.5x, 146.6x, 146.7x, 146.8x, 146.9x 147.xx, 148.0x, 148.1x, 148.2x, 148.3x, 148.8x, 148.9x, 149.xx, 160.0x, 160.1x, 160.2x, 160.3x, 160.4x, 160.5x, 160.8x, 160.9x, 161.xx, 195.0x	C12.xx, C13.xx, C14.xx, C30.xx, C31.xx, C32.xx, C76.0x
Kidney Cancer	189.0x	C64.xx
Liver Cancer	155.xx, 156.0x, 156.1x, 156.2x, 156.8x, 156.9x	C22.xx, C23.xx, C24.xx
Lung Cancer	162.0x, 162.2x, 162.3x, 162.4x, 162.5x, 162.8x, 162.9x, 165.xx	C33.xx, C34.xx, C39.xx, C45.xx
Lymphoma	202.80, 202.81, 202.82, 202.83, 202.84, 202.85, 202.86, 202.87, 202.88, 203.80, 203.82, 200.0x, 200.1x, 200.2x, 200.3x, 200.4x, 200.5x, 200.6x, 200.7x, 200.8x, 201.xx, 202.0x, 202.1x, 202.2x, 202.4x, 202.7x, 273.3x	C81.xx, C82.xx, C83.xx, C84.xx, C85.xx, C86.xx, C88.xx, C91.4x
Pancreatic Cancer	157.xx	C25.xx
Prostate Cancer	185.xx	C61.xx
Upper GI Cancer	150.xx, 151.xx, 152.xx	C15.xx, C16.xx, C17.xx
Uterine Cancer	179.xx, 182.xx	C54.xx, C55.xx

Appendix II: List of RO Model Bundled HCPCS[3]

HCPCS	HCPCS Description	Category
55920	Placement Pelvic Needles/Catheters, Brachytherapy	Radiation Treatment Delivery (Brachytherapy Surgery)
57155	Placement Tandem and Opioids, Brachytherapy	Radiation Treatment Delivery (Brachytherapy Surgery)
57156	Placement Vaginal Cylinder, Brachytherapy	Radiation Treatment Delivery (Brachytherapy Surgery)
58346	Placement Heyman Capsules, Brachytherapy	Radiation Treatment Delivery (Brachytherapy Surgery)
77014	Computed tomography guidance for placement of	Medical Radiation Physics, Dosimetry, Treatment Devices, Special Services
77021	Magnetic resonance guidance for needle placement	Medical Radiation Physics, Dosimetry, Treatment Devices, Special Services
77261	Radiation therapy planning	Treatment Planning
77262	Radiation therapy planning	Treatment Planning
77263	Radiation therapy planning	Treatment Planning
77280	Set radiation therapy field	Medical Radiation Physics, Dosimetry, Treatment Devices, Special Services
77285	Set radiation therapy field	Medical Radiation Physics, Dosimetry, Treatment Devices, Special Services
77290	Set radiation therapy field	Medical Radiation Physics, Dosimetry, Treatment Devices, Special Services
77293	Respirator motion mgmt simul	Medical Radiation Physics, Dosimetry, Treatment Devices, Special Services
77295	3-d radiotherapy plan	Medical Radiation Physics, Dosimetry, Treatment Devices, Special Services
77299	Radiation therapy planning	Medical Radiation Physics, Dosimetry, Treatment Devices, Special Services
77300	Radiation therapy dose plan	Medical Radiation Physics, Dosimetry, Treatment Devices, Special Services
77301	Radiotherapy dose plan imrt	Medical Radiation Physics, Dosimetry, Treatment Devices, Special Services
77306	Telethx isodose plan simple	Medical Radiation Physics, Dosimetry, Treatment Devices, Special Services
77307	Telethx isodose plan cplx	Medical Radiation Physics, Dosimetry, Treatment Devices, Special Services
77316	Brachytx isodose plan simple	Medical Radiation Physics, Dosimetry, Treatment Devices, Special Services

[3] Table 2 Proposed Rule, pg 85 - 87; https://www.hhs.gov/sites/default/files/CMS-5527-P.pdf

HCPCS	HCPCS Description	Category
77317	Brachytx isodose intermed	Medical Radiation Physics, Dosimetry, Treatment Devices, Special Services
77318	Brachytx isodose complex	Medical Radiation Physics, Dosimetry, Treatment Devices, Special Services
77321	Special teletx port plan	Medical Radiation Physics, Dosimetry, Treatment Devices, Special Services
77331	Special radiation dosimetry	Medical Radiation Physics, Dosimetry, Treatment Devices, Special Services
77332	Radiation treatment aid(s)	Medical Radiation Physics, Dosimetry, Treatment Devices, Special Services
77333	Radiation treatment aid(s)	Medical Radiation Physics, Dosimetry, Treatment Devices, Special Services
77334	Radiation treatment aid(s)	Medical Radiation Physics, Dosimetry, Treatment Devices, Special Services
77336	Radiation physics consult	Medical Radiation Physics, Dosimetry, Treatment Devices, Special Services
77338	Design mlc device for imrt	Medical Radiation Physics, Dosimetry, Treatment Devices, Special Services
77370	Radiation physics consult	Medical Radiation Physics, Dosimetry, Treatment Devices, Special Services
77371	Srs multisource	Radiation Treatment Delivery
77372	Srs linear based	Radiation Treatment Delivery
77373	Sbrt delivery	Radiation Treatment Delivery
77385	Ntsty modul rad tx dlvr smpl	Radiation Treatment Delivery
77386	Ntsty modul rad tx dlvr cplx	Radiation Treatment Delivery
77387	Guidance for radiaj tx dlvr	Radiation Treatment Delivery (Guidance)
77399	External radiation dosimetry	Medical Radiation Physics, Dosimetry, Treatment Devices, Special Services
77402	Radiation treatment delivery	Radiation Treatment Delivery
77407	Radiation treatment delivery	Radiation Treatment Delivery
77412	Radiation treatment delivery	Radiation Treatment Delivery
77417	Radiology port images(s)	Radiation Treatment Delivery (Guidance)
77424	Io rad tx delivery by x-ray	Radiation Treatment Delivery
77425	Io rad tx deliver by elctrns	Radiation Treatment Delivery
77427	Radiation tx management x5	Treatment Management
77431	Radiation therapy management	Treatment Management
77432	Stereotactic radiation trmt	Treatment Management
77435	Sbrt management	Treatment Management
77470	Special radiation treatment	Treatment Management
77499	Radiation therapy management	Treatment Management
77520	Proton trmt simple w/o comp	Radiation Treatment Delivery
77522	Proton trmt simple w/comp	Radiation Treatment Delivery
77523	Proton trmt intermediate	Radiation Treatment Delivery
77525	Proton treatment complex	Radiation Treatment Delivery
77761	Apply intrcav radiat simple	Radiation Treatment Delivery

HCPCS	HCPCS Description	Category
77762	Apply intrcav radiat interm	Radiation Treatment Delivery
77763	Apply intrcav radiat compl	Radiation Treatment Delivery
77767	Hdr rdncl skn surf brachytx	Radiation Treatment Delivery
77768	Hdr rdncl skn surf brachytx	Radiation Treatment Delivery
77770	Hdr rdncl ntrstl/icav brchtx	Radiation Treatment Delivery
77771	Hdr rdncl ntrstl/icav brchtx	Radiation Treatment Delivery
77772	Hdr rdncl ntrstl/icav brchtx	Radiation Treatment Delivery
77778	Apply interstit radiat compl	Radiation Treatment Delivery
77789	Apply surf ldr radionuclide	Radiation Treatment Delivery
77790	Radiation handling	Medical Radiation Physics, Dosimetry, Treatment Devices, Special Services
77799	Radium/radioisotope therapy	Radiation Treatment Delivery
A9527	Iodine i-125 sodium iodide	Radiation Treatment Delivery (Brachytherapy Materials)
C1715	Brachytherapy needle	Radiation Treatment Delivery (Brachytherapy Materials)
C1716	Brachytx, non-str, gold-198	Radiation Treatment Delivery (Brachytherapy Materials)
C1717	Brachytx, non-str,hdr ir-192	Radiation Treatment Delivery (Brachytherapy Materials)
C1719	Brachytx, ns, non-hdrir-192	Radiation Treatment Delivery (Brachytherapy Materials)
C1728	Catheter, brachytherapy seed administration	Radiation Treatment Delivery (Brachytherapy Materials)
C2616	Brachytx, non-str,yttrium-90	Radiation Treatment Delivery (Brachytherapy Materials)
C2634	Brachytx, non-str, ha, i-125	Radiation Treatment Delivery (Brachytherapy Materials)
C2635	Brachytx, non-str, ha, p-103	Radiation Treatment Delivery (Brachytherapy Materials)
C2636	Brachy linear, non-str,p-103	Radiation Treatment Delivery (Brachytherapy Materials)
C2638	Brachytx, stranded, i-125	Radiation Treatment Delivery (Brachytherapy Materials)
C2639	Brachytx, non-stranded,i-125	Radiation Treatment Delivery (Brachytherapy Materials)
C2640	Brachytx, stranded, p-103	Radiation Treatment Delivery (Brachytherapy Materials)
C2641	Brachytx, non-stranded,p-103	Radiation Treatment Delivery (Brachytherapy Materials)
C2642	Brachytx, stranded, c-131	Radiation Treatment Delivery (Brachytherapy Materials)
C2643	Brachytx, non-stranded,c-131	Radiation Treatment Delivery (Brachytherapy Materials)

HCPCS	HCPCS Description	Category
C2644	Brachytx cesium-131 chloride	Radiation Treatment Delivery (Brachytherapy Materials)
C2645	Brachytx planar, p-103	Radiation Treatment Delivery (Brachytherapy Materials)
C2698	Brachytx, stranded, nos	Radiation Treatment Delivery (Brachytherapy Materials)
C2699	Brachytx, non-stranded, nos	Radiation Treatment Delivery (Brachytherapy Materials)
G0339	Robot lin-radsurg com, first	Radiation Treatment Delivery
G0340	Robt lin-radsurg fractx 2-5	Radiation Treatment Delivery
G6001	Echo guidance radiotherapy	Radiation Treatment Delivery (Guidance)
G6002	Stereoscopic x-ray guidance	Radiation Treatment Delivery (Guidance)
G6003	Radiation treatment delivery	Radiation Treatment Delivery
G6004	Radiation treatment delivery	Radiation Treatment Delivery
G6005	Radiation treatment delivery	Radiation Treatment Delivery
G6006	Radiation treatment delivery	Radiation Treatment Delivery
G6007	Radiation treatment delivery	Radiation Treatment Delivery
G6008	Radiation treatment delivery	Radiation Treatment Delivery
G6009	Radiation treatment delivery	Radiation Treatment Delivery
G6010	Radiation treatment delivery	Radiation Treatment Delivery
G6011	Radiation treatment delivery	Radiation Treatment Delivery
G6012	Radiation treatment delivery	Radiation Treatment Delivery
G6013	Radiation treatment delivery	Radiation Treatment Delivery
G6014	Radiation treatment delivery	Radiation Treatment Delivery
G6015	Radiation tx delivery imrt	Radiation Treatment Delivery
G6016	Delivery comp imrt	Radiation Treatment Delivery
G6017	Intrafraction track motion	Radiation Treatment Delivery (Guidance)
Q3001	Brachytherapy radioelements	Radiation Treatment Delivery (Brachytherapy Materials)
77469	Intraoperative radiation treatment management	Treatment Management