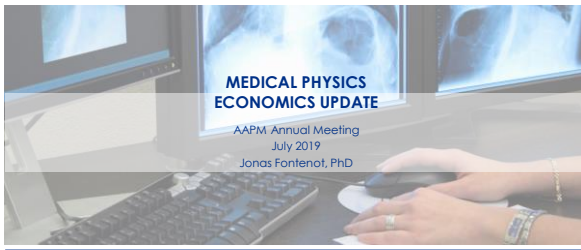


AMERICAN ASSOCIATION of PHYSICISTS IN MEDICINE  
Advancing the Science, Education & Professional Practice of Medical Physics



**MEDICAL PHYSICS  
 ECONOMICS UPDATE**  
 AAPM Annual Meeting  
 July 2019  
 Jonas Fontenot, PhD

1431 Prince Street, Alexandria, VA 22314 | 571-298-1300 | www.aapm.org

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**DISCLAIMER**

- Jonas Fontenot has no conflicts to declare.
- The comments in this presentation are not intended to express a political opinion.

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**The AAPM Professional Economics Committee**

- Purpose**
  - Monitor and analyze the activities of entities that influence reimbursement for medical physics services, advise the Association on the formal positions it should take on related issues, and provide information to the membership and other organizations.
- Activities/ Responsibilities**
  - Review the proposed actions of CMS and other reimbursement agencies
  - Review guidelines that relate to the use of CPT codes and their implementation
  - Ensure coordination between the activities of the AAPM and those of related organizations
  - Work with related organizations to develop consistent responses to proposals and issues of mutual concern
  - Provide information to the membership through existing channels within the AAPM
  - Provide information to other organizations regarding reimbursement for professional medical physics services.

**Members**  
 Jonas Fontenot (chair)  
 Michele Ferencik (vice-chair)  
 Blake Dirksen  
 Jim Goodwin  
 Dan Paollet  
 George Sherouse  
 Christopher Waite-Jones  
 Jerry White  
 Sam Erstein  
 Cynthia McCollum  
 David Fiorentino  
 Richard Martin  
 Wendy Smith Fust

AMERICAN ASSOCIATION  
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## Radiation Oncology Model

- **Proposed Rule Published July 10th**
  - Information is hot off the press!
  - We don't have all of the answers and are considering the impact to radiation oncology, which will require extensive external economic analysis
- **AAPM Will Submit Comments by September 16<sup>th</sup> deadline**
- **Final Rule on or after November 1, 2019**
- **Proposed Implementation Date is January 1, 2020**
  - CMS proposed a potential delayed start of April 1, 2020



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## Radiation Oncology Model



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## Overview

- CMS proposes creation and testing of a new payment model for radiation oncology services to promote quality and financial accountability for an episode of care
- Test whether prospective episode-based payments to physician group practices (PGPs), hospital outpatient departments (HOPDs) and freestanding radiation therapy centers would reduce Medicare expenditures while preserving or enhancing the quality of care for Medicare beneficiaries
- CMS anticipates that RO Model would benefit Medicare beneficiaries by encouraging more efficient care delivery and incentivizing higher value care



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## Overview

- **90-day Episode of Care**
- **17 Disease Sites**
- **Prospective Payment**
  - Professional Component
  - Technical Component
- **Site-Neutral Payment**
  - Base Payment amounts the same for HOPDs and freestanding radiation therapy centers
- **5 Performance Years Beginning in 2020 and Ending December 31, 2024**




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## CMS Data Analysis

- **Fee-For-Service Claims Analysis January 1, 2015-December 31, 2017**
  - HOPDs 64% of episodes
  - Freestanding Centers 36% of episodes
- **Freestanding Center Episodes Paid ~\$1,800 (11%) More than HOPDs**
- **Freestanding Centers Use More IMRT and Perform More Fractions than HOPDs**




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## CMS Data Analysis

- **Medicare Payment for RT Increased Substantially from 2000-2010**
  - Physician Billing increased 8.2%
  - Medicare Part B Billing increased 216%
  - Most of the increase attributed to IMRT
- **From 2010-2016 Spending and Volume for Proton Beam Therapy (PBT) Grew Rapidly**
  - Increased number of proton beam centers
  - Medicare's broad coverage of PBT




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### Beneficiary Population

- **Medicare Beneficiaries Include:**
  - Eligible for Medicare Part A and Enrolled in Part B; and
  - "Traditional" Medicare as Primary Payer
- **Medicare Beneficiaries Enrolled in Any Managed Care Organization Excluded:**
  - All Medicare Advantage Plans (Medicare Part C)
- **Medicare Beneficiaries Cannot "Opt Out" of RO Model but Can Refuse to Share Data with CMS**
  - Beneficiary may seek care in a different geographic location




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### RO Model Participants

- **Physician Group Practices, Hospital Outpatient Departments & Freestanding Radiation Therapy Centers**
  - Professional participants
  - Technical participants
  - Dual participants
- **Mandatory for Random Selection of Core-Based Statistical Areas (CBSAs)**
  - Required participation by ~40% of all radiation practices
    - 616 PGPs (325 freestanding centers)
      - 173 practice in both freestanding & HOPDs
      - 285 HOPDs only
      - 158 freestanding only
    - 541 HOPDs
  - Participants not identified until after Final Rule publication




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### Excluded RO Participants

- **11-Designated PPS-Exempt Cancer Centers**

• City of Hope Medical Center	• Roswell Park
• University of Southern California	• Ohio State University James Cancer Hospital
• University of Miami	• Fox Chase Hospital
• H. Lee Moffitt Cancer and Research Hospital	• M.D. Anderson Cancer Center
• Dana-Farber Cancer Institute	• Fred Hutchinson/Seattle Cancer Center Alliance
• Memorial Sloan Kettering	
- **Ambulatory Surgical Centers**
- **Critical Access Hospitals**
- **RT Services Furnished in Maryland, Vermont, US Territories & Pennsylvania Rural Health Model**
- **No Hardship Exemptions**




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### 17 Cancer Types

• Anal Cancer	• Kidney Cancer
• Bladder Cancer	• Liver Cancer
• Bone Metastases	• Lung Cancer
• Brain Metastases	• Lymphoma
• Breast Cancer	• Pancreatic Cancer
• Cervical Cancer	• Prostate Cancer
• CNS Tumors	• Upper GI Cancer
• Colorectal Cancer	• Uterine Cancer
• Head & Neck Cancer	

No Skin Cancer or Benign Neoplasms



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### Included RT Services

- Consultation
- Treatment Planning
- Dose Planning
- Medical Physics & Dosimetry
- Treatment Devices
- Special Services
- Treatment Delivery
- Treatment Management
- 4 Brachytherapy Surgical Procedures
  - CPT 55920, 57155, 57156, 58346
- Brachytherapy Sources



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### Excluded Services

- Evaluation & Management Services
- Low Volume RT Services
- Certain Brachytherapy Surgical Procedures
- Neutron Beam Therapy
- Hyperthermia Treatment
- Radiopharmaceuticals



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### Included RT Modalities

- External Beam Radiation Therapy
- 3-D Conformal Radiotherapy (3DCRT)
- Intensity Modulated Radiation Therapy (IMRT)
- Stereotactic Radiosurgery (SRS)
- Stereotactic Body Radiotherapy (SBRT)
- Intraoperative Radiotherapy (IORT)
- Image-Guided Radiation Therapy (IGRT)
- Brachytherapy
- Proton Beam Therapy (PBT)
  - CMS may exclude PBT clinical trials




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### Episode Length & Trigger

- **90-day Episode of Care**
  - CMS reports that 99% of beneficiaries complete course of radiation within 90 days of initial treatment planning service
- **Day 1 is Triggered by Initial Treatment Planning Date of Service as Reported by the Professional or Dual Participant**
  - CPT 77261, 77262, 77263




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### Episode Length & Trigger

- **At Least 1 RT Delivery Service Must Be Provided Within 28 days of the Initial Treatment Planning Service as Reported by the Technical or Dual Participant**
  - Incomplete Episode if RT delivery is not provided within 28 days of treatment planning
- **CMS Establishes a "Clean Period" for 28 Days After the End of the Previous Episode**
  - Medically necessary RT services would be separately billed and paid during the "clean period"




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### Payment Methodology

- **Prospective Payment**
  - 1<sup>st</sup> payment (50%) when Episode is triggered
  - 2<sup>nd</sup> payment (50%) after Episode has ended
  - New RO model-specific HCPCS codes and modifiers will denote beginning and end of episode of care
  
- **Separate Payment for PC and TC for Each of the 17 Cancer Types**




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### Pricing Methodology

- **Payment Amount Determined By:**
  - National Base Rates
    - Based on Hospital Outpatient rates
    - No Physician Fee Schedule rates utilized
  - Trend Factors
  - Adjustment for Case-Mix, Historical Experience and Geographic Location
  - Payments Adjusted for Withholds for Incomplete Episodes, Quality, and Starting in Year 3 Beneficiary Experience




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### Pricing Methodology

- **RO Participants Have the Ability to Earn Back a Portion of the Quality and Patient Experience Withholds Based On:**
  - Reporting of clinical data
  - Reporting and performance on quality measures
  - Performance on Beneficiary-reported CAHPS Cancer Care Radiation Therapy Survey (beginning in Performance Year 3)
- **20% Beneficiary Coinsurance**
- **2% Sequestration (reduction) remains in effect**




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**Proposed National Base Rates (in 2017 Dollars)**

PC or TC	Cancer Type	Base Rate
Professional	Anal Cancer	\$2,968
Technical	Anal Cancer	\$16,006
Professional	Bladder Cancer	\$2,637
Technical	Bladder Cancer	\$12,556
Professional	Bone Metastases	\$1,372
Technical	Bone Metastases	\$5,568
Professional	Brain Metastases	\$1,566
Technical	Brain Metastases	\$9,217
Professional	Breast Cancer	\$2,074
Technical	Breast Cancer	\$9,740




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**Proposed National Base Rates (in 2017 Dollars)**

PC or TC	Cancer Type	Base Rate
Professional	Cervical Cancer	\$3,779
Technical	Cervical Cancer	\$16,955
Professional	CNS Tumor	\$2,463
Technical	CNS Tumor	\$14,193
Professional	Colorectal Cancer	\$2,369
Technical	Colorectal Cancer	\$11,589
Professional	Head & Neck Cancer	\$2,947
Technical	Head & Neck Cancer	\$16,708
Professional	Kidney Cancer	\$1,550
Technical	Kidney Cancer	\$7,656




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**Proposed National Base Rates (in 2017 Dollars)**

PC or TC	Cancer Type	Base Rate
Professional	Liver Cancer	\$1,515
Technical	Liver Cancer	\$14,650
Professional	Lung Cancer	\$2,155
Technical	Lung Cancer	\$11,451
Professional	Lymphoma	\$1,662
Technical	Lymphoma	\$7,444
Professional	Pancreatic Cancer	\$2,380
Technical	Pancreatic Cancer	\$13,070




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**Proposed National Base Rates (in 2017 Dollars)**

PC or TC	Cancer Type	Base Rate
Professional	Prostate Cancer	\$3,228
Technical	Prostate Cancer	\$19,852
Professional	Upper GI	\$2,500
Technical	Upper GI	\$12,619
Professional	Uterine Cancer	\$2,376
Technical	Uterine Cancer	\$11,221




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**Encounter Claims Data**

- **RO Participants Required to Submit Encounter Claims Data That Include All RT Services on the RO Model Bundled Procedure List**
  - Report all HCPCS/CPT codes as services are delivered
  - No payment for these claims
  
- **Used for Evaluation and Model Monitoring, Specifically Trending Utilization of RT Services**
  - Other CMS research




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**Quality Data**

- **CMS Proposes to Adopt 4 Quality Measures**
  - Oncology: Medical and Radiation-Plan of Care for Pain
  - Preventive Care and Screening: Screening for Depression and Follow-Up Plan
  - Advance Care Plan
  - Treatment Summary Communication-Radiation Oncology
  
- **Incorporate Patient Experience Measures Based on CAHPS Cancer Care Survey**
  - Pay-for-Performance measures begin in Year 3
  - CMS future rulemaking




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### Clinical Data Collection

- **CMS Proposes Additional Clinical Information on Certain Medicare Beneficiaries**
  - Pay for Reporting
  - Reported by Professional and Dual Participants
  - Report basic clinical information not available in claims data or captured in quality measures
    - Cancer Stage
    - Disease Involvement
    - Treatment Intent
    - Specific Treatment Plan Information
  - Required for 5 types of Cancer: Prostate, Breast, Lung, Bone Metastases and Brain Metastases
  - CMS uses data to support clinical monitoring and evaluation of RO Model




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### Data Sharing

- **CMS Proposes that RO Participants Supply and/or Confirm a Limited Amount of Summary Information**
  - Tax Identification Number (TIN), CMS Certification Number (CCN) and National Provider Identifiers (NPIs)
  - Number of Medicare and non-Medicare patients treated with radiation
  - Additional administrative data upon request from CMS
    - RO Participant's costs to provide care, such as the acquisition cost of a linear accelerator and how frequently the radiation machine is used on an average day
    - Current Electronic Health Records (EHR) Vendors
    - Accreditation Status
  - CMS uses data to better understand participants' office activities, benchmarks and track participant compliance




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### Other Policies & Procedures

- **Annual Reconciliation Process**
  - Additional payments owed to RO Participants ; or
  - Payments owed to CMS that exceed Withhold policies
- **Timely Error Notice & Reconsideration Request Process**
  - Dispute suspected errors in calculation of reconciliation payment amount or repayment amount
  - First level is Timely Error Notice within 30 Days from date of RO Reconciliation Report issued
  - Second level is Reconsideration Process within 10 days of CMS written response to Timely Error Notice
- **Monitoring & Compliance**




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### Other Policies & Procedures

- **Beneficiary Protections**
  - Professional and Dual Participants must notify Medicare beneficiaries that they are participating in this RO Model
    - Written notification during Initial Treatment Planning Session
    - Standardized Notification Template in order to limit potential for fraud and abuse, including patient steering
  
- **RO Model Qualifies as an Advanced Alternative Payment Model (APM) and Meets Criteria to be a Merit-Based Incentive Payment System (MIPS) APM**
  - APM entities at 100% risk for all costs associated with RT services in excess of the expected amount of expenditures




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### Impacts

- **CMS Estimates Savings of \$250-\$260 Million (or 3%) over the RO Model's Five-Year Performance Period**
  - CMS asserts the RO Model's episode payment is designed to give radiation oncologists greater predictability in payment and greater opportunity to clinically manage Episodes of Care, rather than being driven by Fee-For-Service payment incentives




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### What does this all mean to my department?

- **Lots of unknowns and much analysis is needed**
  - Ratesetting methodology is key
  - CMS has invited comment on many elements
  
- **The proposal is likely to move forward in some form**
  - Approximately 40% of non-exempt RT departments will be included
    - No immediate impact on departments not included
  - Only traditional Medicare patients are included in APM
    - Likely represents 20-50% of patient volume at most facilities




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**What does this all mean to my department?**

- **For those episodes in the APM**
  - Proton therapy economics more difficult
    - H&N 2015-17: CMS paid \$34,319 per episode
    - H&N 2020: CMS proposes \$19,655 base rate per episode
  - Less incentive for conventional fractionation utilization
    - Breast (20+ fx) 2015-17: CMS paid \$13,647 per episode
    - Breast (20+ fx) 2020: CMS proposes \$11,814 base rate per episode
  - More incentive for certain brachytherapy utilization
    - Prostate LDR implant 2015-17: CMS paid \$7,064 per episode
    - Prostate LDR implant 2020: CMS proposes \$23,080 base rate per episode




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**Next Steps**

- **Additional analysis**
- **Collaboration with sister societies**
- **OPPS and MFPS proposed rules(!!!)**
- **Comment letters to CMS by Sept 16**
- **Final Rule on or after Nov 1**
  
- **Stay tuned**
  - AAPM website
  - Member webinars




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**RESOURCES**

- Center for Medicare and Medicaid Innovation (CMMI)-RO Model Description and Technical Documents  
<https://innovation.cms.gov/initiatives/radiation-oncology-model/>
  
- AAPM Government Affairs Tab on the AAPM website  
[http://aapm.org/government\\_affairs/CMS/2020HealthPolicyUpdate.asp](http://aapm.org/government_affairs/CMS/2020HealthPolicyUpdate.asp)
  
- Reach out to us  
[jfontenot@marybird.com](mailto:jfontenot@marybird.com)  
[wendy@healthpolicysolutions.net](mailto:wendy@healthpolicysolutions.net)

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