



Overview of regulatory requirements and the physicist's role in the dose monitoring process

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Relevant Conflicts of Interest



Paid Speaker, Bayer



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States

- **California SB 1237 and AB510**
 - Dose metrics & excessive dose reporting
- **Texas Administrative Code 25 TAC 289.227**
 - Same + CT Protocol Committee
- **Connecticut Bill 6423**
 - Stalled in committee

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Joint Commission

- Monitoring Software not necessary, but can be useful

A.26. Diagnostic computed tomography (CT) imaging protocols are reviewed and kept current with input from an interpreting radiologist, medical physicist, and lead imaging technologist to make certain that they adhere to current standards of practice and account for changes in CT imaging equipment. These reviews are conducted at time frames identified by the organization. ...

Element of Performance for PI.02.01.01
A.6. The organization reviews and analyzes incidents where the radiation dose index (CTDIvol, DI.P, or size-specific dose estimate [SSDE]) from diagnostic CT examinations exceeded expected dose index ranges identified in imaging protocols. These incidents are then compared to external benchmarks.

Elements of Performance for PC.01.03.01
A.26. The organization establishes or adopts diagnostic computed tomography (CT) imaging protocols based on current standards of practice, which address key criteria including clinical indication, contrast administration, age (to indicate whether the patient is pediatric or an adult), patient size and body habitus, and the expected radiation dose index range. ...

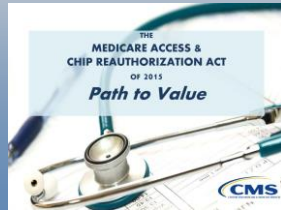
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MACRA/MIPS

- Medicare Access and CHIP Reauthorization Act
 - Reimbursement pay for performance
- Merit-Based Incentive Payment System
 - Program that determines payment adjustment

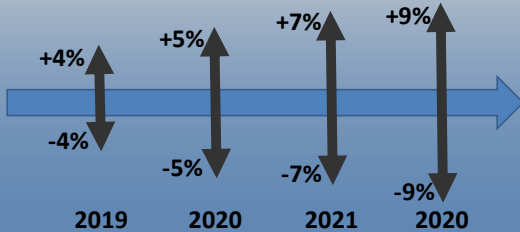


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MACRA/MIPS



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MACRA Metric 359

- **Optimizing Patient Exposure to Ionizing Radiation: Utilization of a Standardized Nomenclature for CT**
- **Percentage of CT reports with the imaging study named according to a standardized nomenclature and the standardized nomenclature is used in institution's computer systems**

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MACRA Metric 361

- **Optimizing Patient Exposure to Ionizing Radiation: Reporting to a Radiation Dose Index Registry**
 - ACR DIR
- **Percentage of total CTs that are reported to a radiation dose index registry**

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MACRA Metric 436

- **Radiation Consideration for Adult CT: Utilization of Dose Lowering Techniques**
- **Percentage of final reports with documentation that one or more of the following:**
 - Automated exposure control
 - Adjustment of the mA and/or kV according to patient size
 - Use of iterative reconstruction technique

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NEMA/MITA XR-29

- 15% reduction in payment for Medicare Outpatient procedures
- Requires
 - AEC
 - Pre-loaded protocols for adult and child
 - Dose notifications and alerts
 - RDSR
 - Key to monitoring

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Role of Medical Physicist in Dose Review Process

- Organize and run meetings
- Translate physician need into specific action items



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A Little Bit of Knowledge . . .

- Control dose metric data and how it is used
 - AAPM medical physics practice guideline 6.a.



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A Little Bit of Knowledge . . .

- “Why did our dose data stay the same when we bought new machines”
 - You halved your slice thickness



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Communicate Dose Metric Information

- 50 to 64% less than what?
- “Can we say that?”
- Should they say that?



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**Thank
You!**