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All of the changes trended towards improved ratios by
Design Implementation of case rate reimbursement:
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However, this is only one datum point evaluating changes in practice patterns. To
Figure 1. Number of Cases Evaluated
Figure 2. Breast Cancer: Average Fraction Ratios
Figure 3. It is unclear how to classify the average fraction ratios from the FFS arrangement.
Figure 4. Bone Metastases: Average Fraction Ratios
Objective • Traditional fee for service contracts were replaced by bundled or case rate reimbursement and changes in practice
Methods • Descriptive retrospective / pre post evaluation • Population: Patients insured by Medicare Advantage and treated within a large radiation oncology provider in the US; data were collected retrospectively using claims, billing, and certification data • Timeframe: - Pre-period: January 1, 2011 – December 31, 2011 - Implementation of case rate reimbursement: January 1, 2012 – December 31, 2012 - Post-period: January 1, 2013 – December 31, 2013 • Case Rates: - Case rate amounts were based on modality, fractionation schedule, current FFS rates, and ancillary services in compliance with evidence-based protocols. • Outcome and Analyses: - Changes in practice patterns were measured by average fraction ratios across breast, cancer, bone metastases, and prostate cancer. - Fraction rates compare delivered fractions to standards established by the National Comprehensive Cancer Care Network guidelines. - A ratio of 1.0 means that the delivered amount met the recommended guideline. Ratios nearer to one (over or under) demonstrate appropriate therapy. - Tests were used to compare the average fraction ratios between the pre and post periods.
Conclusions • The average fraction ratios changed moderately and in a positive direction (closer to the goal of 1) between the pre (FFS) and post (case rate reimbursement) period. Unadjusted statistics demonstrated statistical significance for prostate and bone metastases, but not breast cancer.
Implications • These findings directionally indicate that practice patterns are not affected by changing from FFS to case rate contractual arrangements. However, this is only one datum point evaluating changes in practice patterns. To fully understand the implications of such a change, further data are needed on patient outcomes, additional practice patterns, and economic outcomes.
Limitations Comparisons of the pre and post periods were conducted using unadjusted statistics only, therefore, confounders affecting the average fraction ratios were not controlled for and may have influenced the findings.

3 Radiation oncology benefit management overview

- As is the case with diagnostic imaging, radiation oncology options evolve continually as new technologies become available. While such advances often improve cancer care and save lives, oversee or misuse inflates cost and can result in side effects. Meanwhile, payers and physicians face challenges in keeping up with the latest medical evidence.

- Radiation oncology benefit management seeks to ensure that patients with cancer receive the correct dose of radiation using the appropriate modality at the right fractionation to achieve the best outcomes and cost of care.

- Traditionally, the radiation oncology benefit manager provides case management and participates in the payment decisions on behalf of the payer. The long-term objective of this process is to ensure radiation oncology treatment plans conform to evidence-based protocol and
  - Preventing recurrence of cancer, which can result from ineffective radiation delivery
  - Preventing secondary cancers caused by unnecessary radiation exposure
  - Preventing side effects, which can require additional treatment

The case for case rate reimbursement

- Radiation oncology practices and health plans typically engage in fee for service (FFS) contractual relationships, which employ utilization management techniques to manage treatment in accordance with recognized guidelines.

- FFS contracts often result in unpredictable revenue streams for practices and burdensome administrative processes for both practices and payers. Moreover, there are limited mechanisms in FFS arrangements for practices and payers to systematically measure quality.

- Case rate reimbursement reduces the need to review the cost associated with modality of treatment, leaving the treatment plan decision to the treating physician.

- Radiation oncologists and health plans share the common goal of systematically improving quality of patient care while reducing administrative burden.

Results Figure 1. Number of Cases Evaluated

Figure 2. Breast Cancer: Average Fraction Ratios

Figure 3. Bone Metastases: Average Fraction Ratios

Figure 4. Prostate Cancer: Average Fraction Ratios

Do case rates affect physicians’ clinical practice in radiation oncology?

After the implementation of case rate reimbursement, there were modest changes in the average fraction ratios across all three cancer types.

All of the changes trended towards improved ratios by moving closer to 1.

Although the number changes in fraction ratios were nominal, they reached statistical significance (unadjusted) for bone metastases and prostate cancer, but not breast cancer.

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