BUNDLED PAYMENTS IN RADIATION ONCOLOGY

CASE STUDIES IN INNOVATIVE SPECIALIST VALUE-BASED PAYMENT INITIATIVES: SPECIALTY PAYMENT REFORMS THAT REDUCE THE COSTS OF PROCEDURES

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21ST CENTURY ONCOLOGY

- Independent, privately-held provider of multispecialty cancer care services
- > 900 physicians across all practice settings and specialties related to cancer care
- Radiation oncology service line
  - 180 facilities (50 hospital-based) in 17 states
  - 34,000 new cases annually
  - ~10% revenues follow alternative payment agreements

WHY RADIATION THERAPY?

- Common cancer treatment: 60% of all cancer patients receive radiotherapy
- Multiple treatment options: Many cancers may be treated from a broad selection of technologies and at varying costs
- Many ancillary services: A radiotherapy care episode can include > 100 units of service distributed over 10 – 15 CPTs under FFS
- Care episodes have sharply defined starts and endpoints over a relatively short period of time
- Acute complications requiring ER and inpatient management are rare

VARIETY OF RADIOTHERAPY OPTIONS

radiosurgery

conventional radiotherapy

proton therapy

HDR brachytherapy

“seeds” brachytherapy

VARIATIONS IN COST
EXAMPLE: PROSTATE CANCER

Prostate cancer is the most common diagnosis treated with radiotherapy. Each treatment option is clinically valid but at greatly variable episodic cost.

	payments to radiotherapy provider and facility	payments to hospital or ASC
conventional radiotherapy	$28,000	none
radiosurgery	$18,000	none
seeds brachytherapy	$4,500	highly variable
HDR brachytherapy	$12,000	highly variable
proton therapy	$59,000	none

all payments are per 2016 CMS PFS and OPPS

FFS LIMITATIONS

Significant cost variation among different treatment options for the same condition invites utilization management

- many oncology management programs, largely designed on predecessor diagnostic imaging programs, are too narrow and incomplete to account for the clinical variability among patients with the same cancer diagnosis and the scope of their treatment options
- peer-to-peer and appeals procedures are of inconsistent quality and effectiveness (eg, non-radiation oncologist peers)
- back-end account reconciliations and appeals procedures create additional administrative burden for payer and provider

FFS LIMITATIONS

FFS payments are misaligned with (1) the overall clinical effort needed to treat common cancers and (2) outcomes. Current payment methods reimburse largely on the basis of equipment costs and time

	prostate cancer	lung cancer
patient treatment burden	only RT	RT + chemo ± surgery
weekly clinical data review	almost none	blood and x-ray tests
weekly medical management	urinary ± bowel symptoms	pneumonia, pneumonitis, esophagitis, infections, anemia
outcomes	little survival impact	large survival impact
technical payment	$26,300	$14,300
professional payment	$1,700	$1,100

DISCUSSION TOPICS

- Key design and operational details of our bundled payment arrangements
- Our program goals and outcomes
  - Improve patient satisfaction
  - Reduce care costs: medical and administrative
  - Preserve high rate of compliance to best clinical practice standards

Bundle Design

BUNDLED PAYMENT MODEL SHOULD BE AS INCLUSIVE AS POSSIBLE

- Payment schedule includes all common cancer diagnoses and services, covering 98% of all radiotherapy episodes
- Uncommon diagnoses and services are excluded and paid per FFS
- Commercial and Medicare Advantage products are included
  - separate payment schedules may apply
  - no geographic rate differentials
- Multi-year terms with annual payer-provider reviews
  - utilization is assessed against contractual benchmarks to evaluate for possible underuse of services
  - pricing is updated per utilization changes observed in the prior term
  - additional services and insurance products are considered for inclusion

BUNDLED PAYMENT MODEL SHOULD OPERATE AS SIMPLY AS POSSIBLE

- Full payment made immediately by the payer (less applicable deductible and co-insurance) upon receipt of claim that reports:
  - ICD-10 diagnosis code covered under the agreement
  - single trigger code (eg, 77261, 77262 or 77263)
- No inlier/outlier provisions or risk adjustments
  - same full rate is paid regardless of the number of treatments or risk factors
- Separate bundled payments for multiple episodes
  - one caveat: if a patient requires treatment for a same diagnosis previously treated and reimbursed within the prior 90 days, then the payer does not make another payment to the provider

QUALITY MEASURES SHOULD EMPHASIZE PROCESS

- Process measures (eg, total dose, number of treatments, selection of treatment technology) are easily reported in radiation oncology
- Measuring quality using clinical outcomes is particularly elusive in cancer care
  - disease and toxicity outcomes become manifest over many years
  - attribution of outcomes is often not direct as patients commonly receive surgery, chemotherapy and/or other drug therapy during their course of care

STAKEHOLDER GOALS

Payers

- reduced unit costs: bundled rates negotiated to yield an aggregate decrease
- mitigated treatment intensity risk: bundled rates are constant regardless of the the technology utilized or the number of treatments
- decreased administrative costs: change in provider economic incentives eliminates payer’s need for inefficient pre-authorizations as operational model changes to pre-notification

STAKEHOLDER GOALS

Patients

- transparent costs: ~ 100% of patient liability can be quantified prospectively
- less hassle: patients are not nuisanced by authorization decisions and delays

Providers

- payment predictability and stability: reimbursement uncoupled from CMS fee schedule updates
- reduced administrative burden: no requirement to submit clinical documentation or participate in peer-to-peer reviews and elevated appeals processes

BUNDLE DEVELOPMENT

Build care pathways for defined diagnosis groups

↓

Model resource costs for each pathway

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Determine diagnosis – pathways distributions

↓ price-weighted averaging

THE BUNDLE PRICE

BUNDLE DEVELOPMENT

Propose bundle prices to payer

↓

Review CPT content of each bundle with payer's medical advisory group

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Determine payment trigger, payment timing and reconciliations

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Establish alternative claim submission process for provider and adjudication process for payer

BUNDLE PROGRAM EXECUTION

- reconciliations for incomplete care episodes can occur quarterly
  - pro rata payments to payer
  - incomplete episodes are infrequent: 2% of all cases
- services are reported using legacy claims management systems and pended for later comparisons to clinical benchmarks
  - CPT data are then analyzed for non-compliance (eg, under-utilization) to agreed benchmarks

Results

Patient Satisfaction

Costs of Care

Compliance with Care Benchmarks

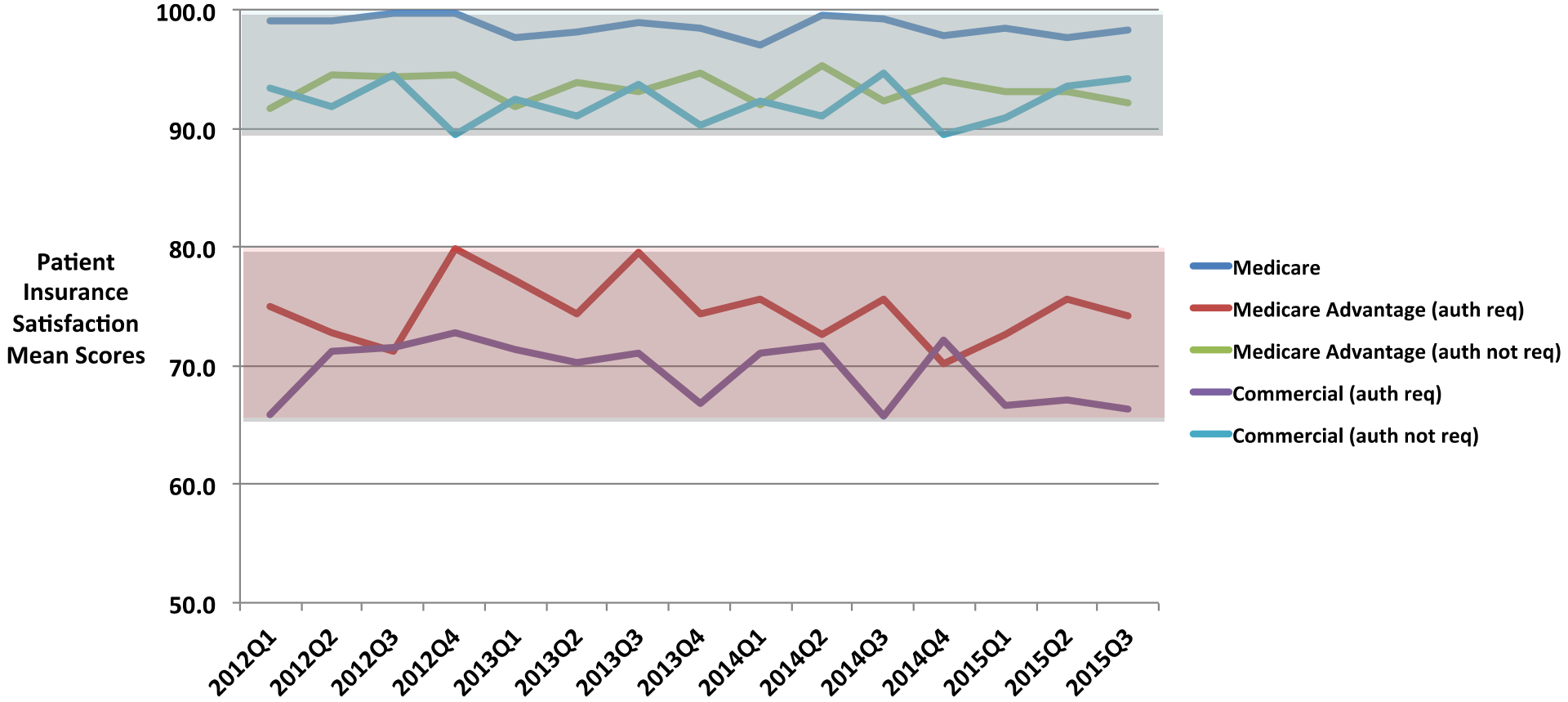
PATIENT SATISFACTION

- assessed independently by a leading patient satisfaction surveyor
- patients answer 30 questions pertaining to various aspects of their overall treatment experience including:
  - ease and timeliness of scheduling
  - appearance and organization of treating facility
  - **insurance (pre-auth delays, coverage of services, etc)**
  - treatment delivery process
  - symptom management
  - disease and survivorship education
- each answer is scored on a 0 – 100 scale; individual scores are aggregated and expressed as domain and overall mean scores

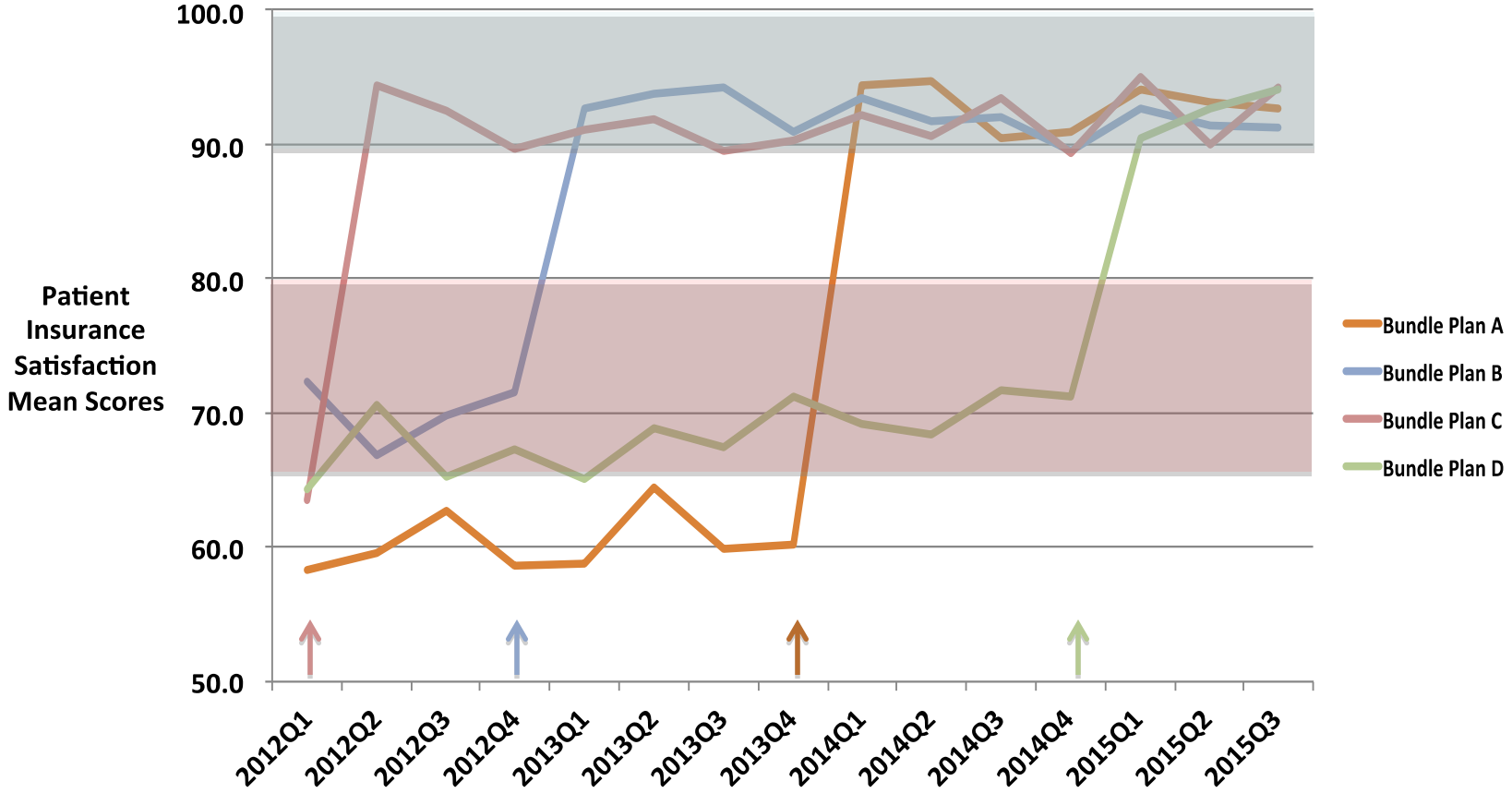
PATIENT SATISFACTION

- Results
  - among all healthplans converted to bundled payments, a significant difference in patient insurance satisfaction was found between the pre and post-bundle implementation reporting periods in favor of the post-bundle period (91.7 vs 66.4, $p < 0.001$)
  - subsequent post-bundle quarters have demonstrated sustained high insurance-related patient satisfaction mean scores
  - no statistically significant differences in other individual domain or overall mean scores were found, although overall patient satisfaction scores trended upward following bundle implementation

PATIENT SATISFACTION



PATIENT SATISFACTION

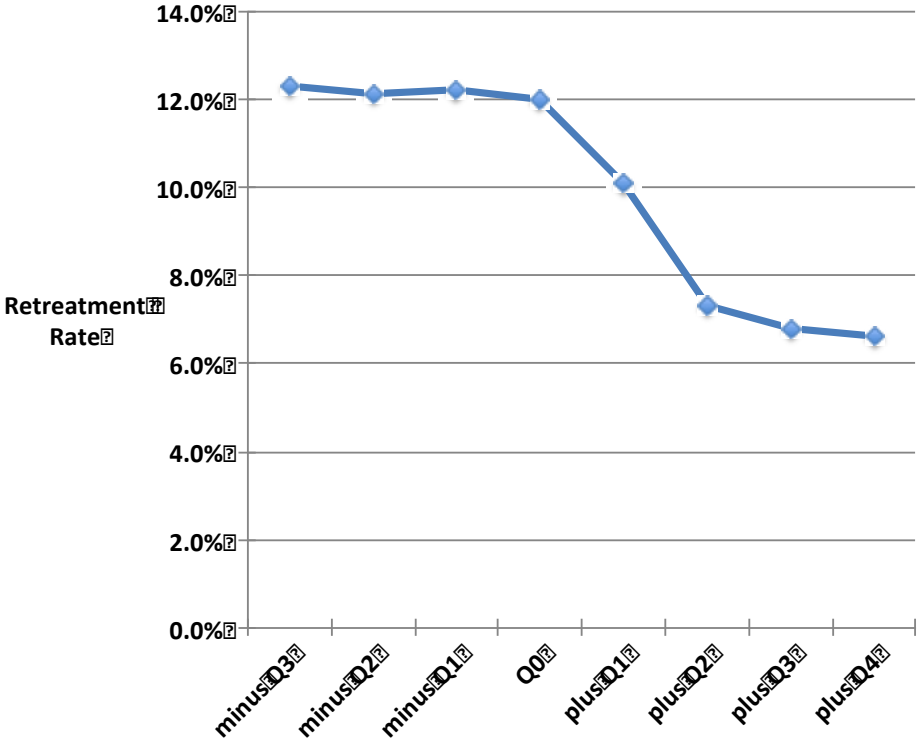


COSTS OF CARE

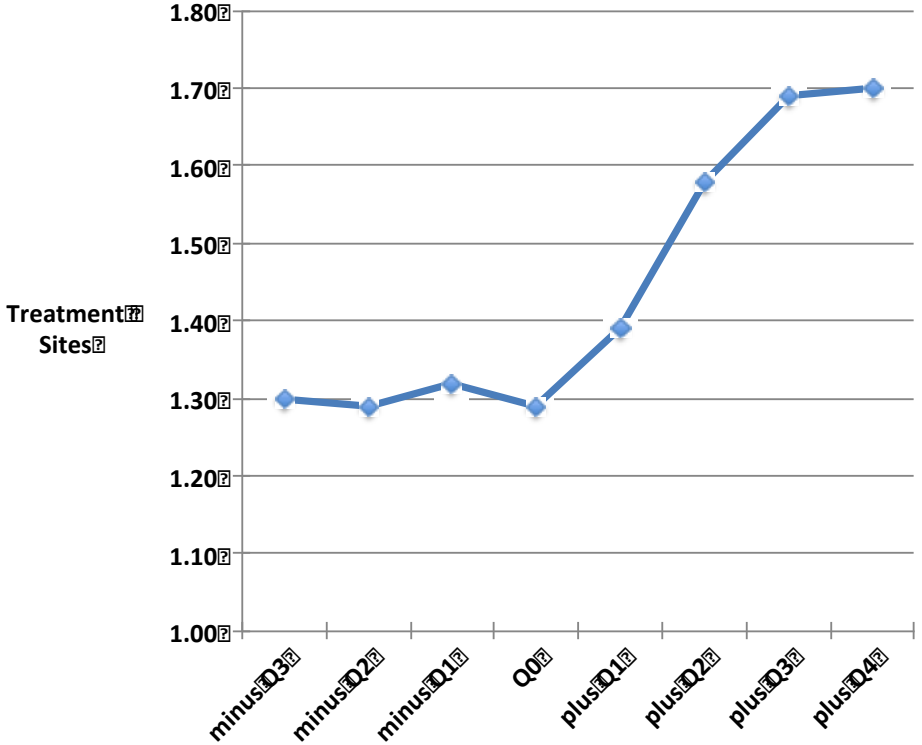
- Modest discounts over current episode care costs may be negotiated through bundled pricing
- Additional savings are realized through original payment coverage of repeat care episodes involving a recently treated diagnosis (ie, within 90 days)
  - metastatic cases contribute 15 – 20% of all cases
  - examples: metastasis of bone, brain, lung and liver
  - episode care costs: $2,500 – 7,500 per case

COSTS OF CARE

Same Diagnosis Retreatment within 90 Days



Mean Number of Treatment Sites per Episode



COMPLIANCE WITH UTILIZATION BENCHMARKS

- Each cancer bundle defines a set of clinically appropriate procedures and their appropriate ranges of utilization frequency – ie, clinical benchmarks
- Using existing claims reporting infrastructure, these procedures and their corresponding service units are entered and pended for subsequent compliance analysis

COMPLIANCE WITH UTILIZATION BENCHMARKS

Diagnosis Group	Pre-Bundle	Post-Bundle
prostate	99.7%	99.5%
breast	94.3%	94.4%
lung	95.3%	95.2%
gastrointestinal	98.3%	99.1%
gynecologic	96.8%	96.9%
head and neck	99.9%	99.9%
brain	99.1%	99.7%
bone metastasis	90.1%	90.3%
brain metastasis	93.4%	94.2%
other metastasis	90.7%	92.4%
ALL	**98.1%**	**98.9%**

TOTAL CASES **8,679 since 2011**

PRINCIPLES OF SUCCESS

- Keep the mechanics simple to ease implementation and maintenance
- Use existing claims management systems as much as possible
- Include as many services and procedures as possible within a bundle
- Develop bundle payment rates for as many diagnoses as possible to spread risk and simplify contract administration

PRINCIPLES OF SUCCESS

- Seek opportunities to better align reimbursement with technology resource allocation **and** clinical effort as current RVUs do not accomplish this goal in many cases
- Physician involvement in the design and development of the bundle model is necessary – physicians are ultimately its end users and determine its success
- Understand that there will be unforeseen operational issues but that they can be managed effectively with willing partners

THANK YOU

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