



Imaging Performance Partnership
and Service Line Strategy Advisor

2019 Market Trends: Imaging

Key Forces Shaping Imaging

The best practices are
the ones that work for **you**.SM

Executive summary

Today's imaging consumers are shopping around for the best imaging services at the lowest prices—are your quality and price transparency initiatives enough to keep pace with your competitors?

Download our ready-to-present slides to learn more about imaging consumerism, as well as the other key forces shaping imaging in 2019, including:

- Key implications of changes in demand and payments for providers
- The impact of value-based care on freestanding imaging
- Regulatory changes that will affect reimbursements for imaging services

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Demand Outlook

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Financial Outlook

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Implications for Providers

Imaging to grow despite headwinds

Insurance changes can negatively impact imaging utilization

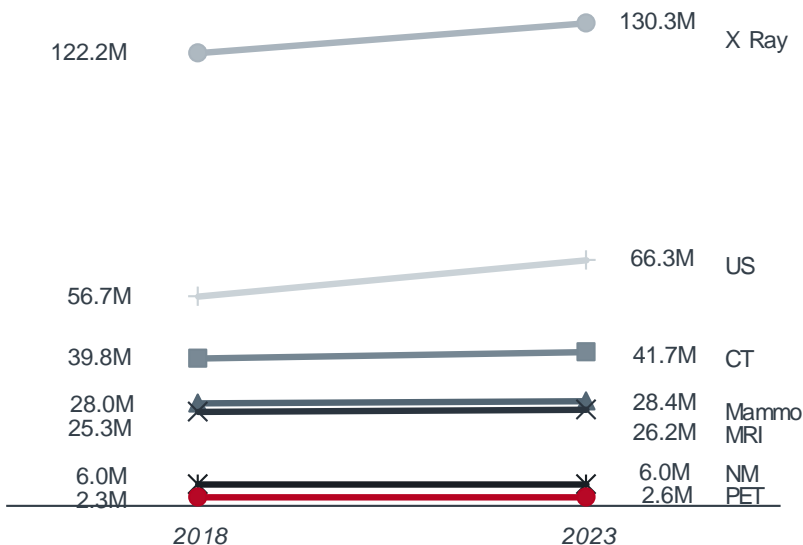
Driver	Rationale and Direction	Net Five-Year Impact
Disease Prevalence, Population Changes, and Demographics	 Cancer incidence, heart disease incidence, and other complex disease growth expected to drive demand for imaging in coming years	11%
	 Utilization rate for 65+ population is 240 exams/1,000 persons compared to 159/1,000 and 72/1,000 for the 45-54 and 18-44 groups	
Technology Adoption	 Minimally and non-invasive technologies, e.g. coronary CT angiography are increasingly replacing more costly, invasive procedures	6%
	 Modest reimbursement rates for emerging imaging technologies limit hospital and ambulatory investment, slowing technology adoption	
Insurance Changes	 Payers increasingly exerting influence over site-of-care decisions, through both patient steering and high deductible health plans	-13%
Readmission Efforts	 Initiatives to reduce 30-day readmissions may reduce demand for ED imaging, although impact is likely to be small	0%
Care Management	 CT compliance mandate fully phased in this year, contributing to strong focus on radiation dose reductions and appropriate imaging	1%

Ultrasound and PET drive overall imaging growth

Population shift, changing guidelines may pressure mammo volumes

National outpatient radiology market projections

Estimated volumes, 2018-2023



Modality	Five-Year Projected Growth
<i>Overall</i>	7.5%
US	17%
PET	11%
MRI	4%
CT	5%
X-Ray	7%
Mammo	1%
NM	-1%

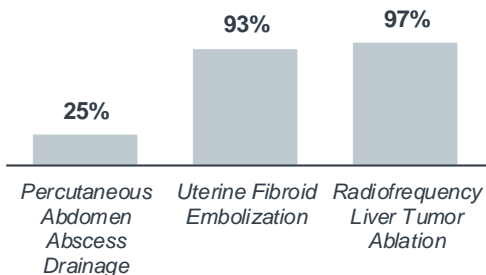
Source: Market drivers sourced from the [Market Scenario Planner](#).

A positive outlook for outpatient IR¹

Interventional radiology growth likely to continue

Five-year growth projections for key outpatient IR procedures

2017-2022



Resources for IR Program development

Download best practice research, market estimator tools, and benchmarks at [Capturing Interventional Radiology's Growth Potential](#)



Drivers of IR growth



Clinical, technological advancements result in **new IR procedures**, treatments options



Aging population increases need for services across health care; IR **appeals to consumers** more than alternatives

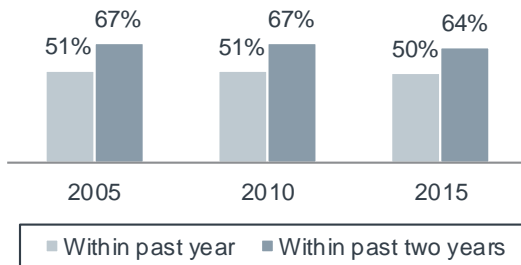


Potential to deliver system-wide, **value-based goals** by reducing total cost of care, shifting patients to lower acuity settings

¹) Interventional radiology.

Breast screening growth requires continued effort

Mammography use, women age 40+



Alternative breast screening options

- DBT²
- Breast MRI
- Breast ultrasound
- Thermography
- Molecular Breast Imaging
- Low-dose mammography
- Contrast enhanced digital mammography

Federal push for breast density reporting

New federal law directs the FDA to develop breast density reporting standard that provides at minimum-

- The effect of breast density in masking the presence of breast cancer
- Qualitative assessment from the provider who reads the mammogram
- A reminder to patients that individuals with dense breast tissue should talk with their providers if they have any questions or concerns about their summary



Change in breast imaging volumes^{2,3} after NJ breast density law² including coverage provision⁴

- +651%** Screening Ultrasound
- +496%** Screening DBT
- +59%** Total Breast MRI⁵

1) Digital Breast Tomosynthesis.

2) Breast Imaging-Reporting and Data System.

3) Volumes compared 18 months prior to and 18 months after the law's adoption.

4) Law covers supplemental imaging.

5) Includes breast MRI's done to evaluate extent of disease, and those for screening and diagnostic purposes.

HDHP¹ consumers avoiding imaging care

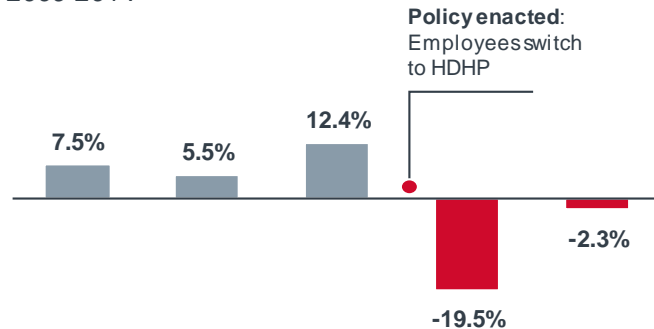
Utilization differences between HDHP, conventionally insured patients

2010-2014



Imaging utilization growth before and after switch to HDHP

2009-2014



Source: Hancock J, Luthra S, "Studies: Employer Costs Slow As Consumers Use Less Care, Deductibles Soar," *Kaiser Health News*, September 24, 2016; Zheng S, et al., "Reductions in Diagnostic Imaging with High Deductible Health Plans," *Medicare Care*, February 2015; Brod-Goldberg Z, et al., "What Does a Deductible Do? The Impact of Cost-Sharing on Health Care Prices, Quantities, and Spending Dynamics," *The Quarterly Journal of Economics*, August 2017; Imaging Performance Partnership interviews and analysis.

1) High-deductible health plan.

Patients aren't shopping as much as we thought

But they still care about easy access and low wait times

Top patient preferences for imaging

Categories of preferred attributes identified



Cost

Out-of-pocket costs <\$30;
provider in-network



Access

Same-day results



Technology

Imaging facility has most
advanced technology



Quality

Subspecialized physicians
interpret scan

Physician referrals: Still hold the sway on imaging patients

- National Bureau of Economic Research studied patient's behavior while getting lower limb MRI scans
- Patients continued to follow physician referrals for MRI disregarding cheaper, more convenient options
- Less than 1% of individuals used a price transparency tool to search price of services in advance of care

Hospitals unprepared for price transparency rule

Smart Choice MRI: transparent pricing, lower cost, consumer-focus



Federal law that requires hospitals to publish prices for medical imaging services online went into effect Jan. 1st 2019

Survey of healthcare providers on price transparency mandate

Survey by Healthcare Business Insights, Nov. 2018

N = 150 providers

92% **Healthcare providers** either 'somewhat' or 'very' concerned about public perception of their charges

43% **Healthcare providers** don't know how to address the pricing mandate

22% **Healthcare providers** plan to post standard charges only

Smart Choice MRI

“On average, an MRI costs \$2,600. Ours cost \$600 or less. Every time.

Smart Choice MRI website

- Retail MRI imaging chain operating out of 17 locations in Minnesota, Illinois, and Wisconsin
- Offers fully transparent MRI pricing, meant to attract price-sensitive patients and employers
- Ensures quality of their reads by using new GE 1.5T scanners and sub-specialty radiologists at the Cleveland Clinic

Source:
<https://www.pmmconline.com/experience/in dust ry-insights/healthcare-providers-concerned-about-cms-price-transparency-final-rule>

Value based care may stifle imaging demand

CT utilization reduced in ACO¹ model

Goals for Value-Based Care



Increasing access to preventative care



Enhancing chronic care management



Improving patient experience



Holding providers accountable to patient outcomes and costs



Tying hospital and physician payment to performance

More providers taking on downside risk



All providers being held accountable for total cost

Decreased Utilization of High Cost Services
(\$22B) - (\$250B)

Range of potential decrease in hospital spending due to MACRA in a recent RAND analysis²

(17%)

Average decrease in utilization of CT services in high-performing ACOs¹



HHS³ 2018 Transition to Value

90%

Medicare FFS⁴ payments tied to quality or value

50%

Medicare payments tied to alternative models

1) Accountable Care Organizations.

2) RAND Corp. Projections, April 7, 2017.

3) Department of Health and Human Services.

4) Fee For Service.

Private payer steerage efforts intensifying

New policies compelling programs to reconsider outpatient strategy

1 Payers providing cash incentives to patients



Patients call, log on to website before undergoing scheduling select procedures



Payer provides patients with list of low-cost providers



If patient chooses lower cost provider, payer rewards with incentive



Example Incentive Programs

Anthem	Blue Cross Blue Shield of Massachusetts
\$50–\$200	\$250

2 Anthem denying hospital-based imaging services



Anthem considers care setting in CT, MR preauthorization, will deny hospital-based exams that do not meet strict criteria¹



Patients are pushed to “geographically accessible”² non-hospital based site for imaging exam



Policy applies to **4.5 million enrollees** in **13 of 14 states** where Anthem operates

UHC jumps on the steerage wagon

UHC will scrutinize certain CT and MRIs performed in HOPD and may deny prior authorization

1) For full list of criteria refer [to Anthem's Clinical UM Guideline Document](#).

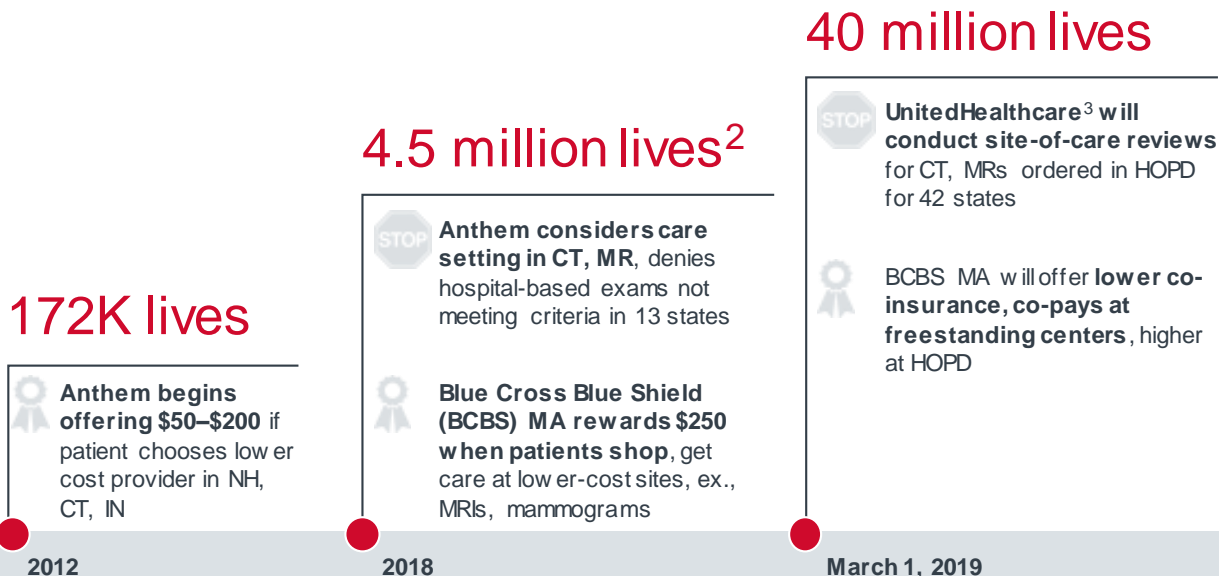
2) Anthem does not define “geographically accessible”.

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Source: Andrews M, “Some Insurers Paying Patients Who Agree to Get Cheaper Care,” *Kaiser Health News*, March 26, 2012; Andrews M, “Need an MRI? Anthem Directs Most Outpatients to Independent Centers,” *Kaiser Health News*, Sept. 26, 2017; Anthem “Clinical UM Guideline,” Nov. 9 2017; Imaging Performance Partnership interviews and analysis.

Scrutiny over costly hospital-based imaging grows

Private payer steerage policies evolving, impacting more patients¹



1) The timeline addresses only major steerage initiatives and may not capture all covered lives impacted by other payer policies.

2) Includes BCBS MA 45,190 enrollees.

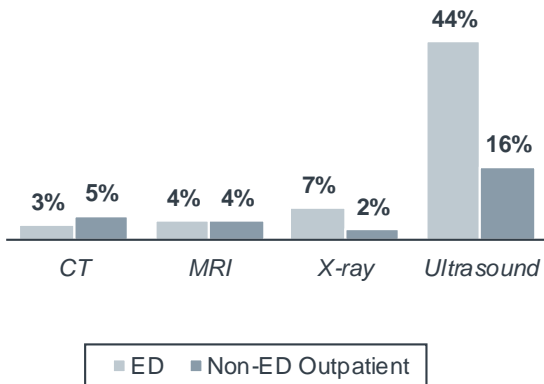
3) Advisory Board is a subsidiary of UnitedHealth Group, the parent company of UnitedHealthcare. All Advisory Board research, expert perspectives, and recommendations remain independent.

Source: "2019 Product and Benefit Updates," BCBS Massachusetts, https://www.bluecrossma.com/common/en_US/pdfs/New_SOB/55-1891_2019_SG_Product_Benefit_Update.pdf; "Blue Cross Blue Shield of Massachusetts Members Get Paid to Shop," BCBS Massachusetts, <http://newsroom.bluecrossma.com/2017-12-11/Blue-Cross-Blue-Shield-of-Massachusetts-Members-Get-Paid-to-Shop>; "Market Share and Enrollment of Largest Three Insurers' Individual Market," Kaiser Family Foundation; Masterson, Les, "UnitedHealth sees membership, revenue up in Q1," Healthcare Dive, <https://www.healthcaredive.com/news/unitedhealth-optimum-q1-2018/521523/>; Imaging Performance Partnership interviews and analysis.

ED, off-campus care settings key to watch

Outpatient volume growth projections

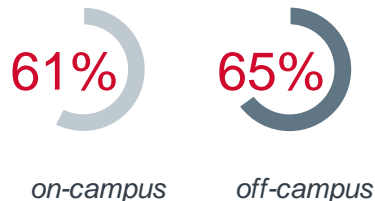
2017-2022



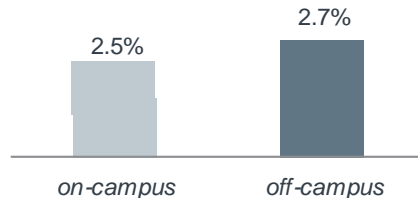
Off-campus growth overtakes hospital¹

2015-2016; n=31-61

Imaging Performance Partnership members reporting outpatient growth



Median outpatient growth reported



1) "Hospital" here means on-campus HOPD. It specifically excludes off-campus facilities (regardless of ownership or billing status), which is described as "off-campus." It also excludes ED.

New disruptors cutting into referral networks

Non-hospital entities may attract price sensitive payers and employers

Three major trends challenging the radiology business model

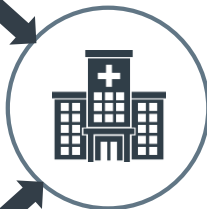
1 Rise of independent referring providers



With rise of Physician ACOs, OptumCare, etc.- independent referring providers becoming more of a force vs. hospital-aligned groups.

2 Resurgence of activist employers

Cost-conscious employers actively looking to shift to lower priced delivery networks



3 Consolidation of radiology groups



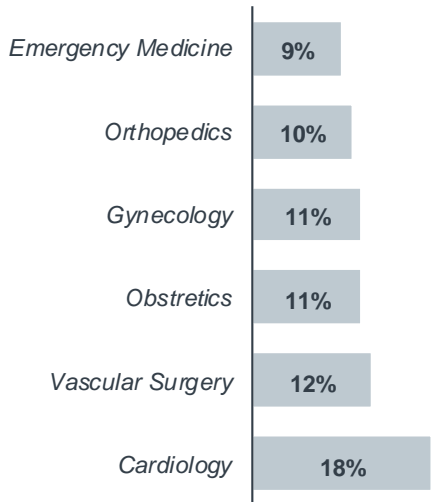
Radiology practices are rapidly consolidating partly in response to provider's push for cheaper outsourced services

More non-rads receive reimbursement for imaging

US, cardiac nuclear medicine common exams performed by non-rads

Imaging share of total Medicare reimbursement by specialists

Medicare provider utilization and payment data, 2018



45% Of the imaging exams performed by non-radiologists were ultrasound

75% Of the imaging exams performed by cardiologists were cardiac nuclear imaging

Impact of non-rad performing imaging procedures on providers

- Rise of turf-wars where radiologists compete with non-radiologists for patients and procedures in the same facility or service area
- Concerns about imaging appropriateness, quality and costs with non-radiologists conducted imaging exams

Source:
https://www.radiologybusiness.com/topics/health-care-economics/non-radiologists-medicare-payments-imaging-exams?utm_source=newsletter&utm_medium=rb_economics

Radiology practices pursuing consolidation

Consolidated groups will have more negotiating power

7

Of the top 20 radiology practices completed a merger and acquisition deal within the last 18 months.

Factors supporting radiology practice consolidation

- Increase demand for services and coverage by health systems
- Fragmented imaging market leading to increased competition
- Rise of AI in radiology threatening radiologist's role
- Hospital consolidation giving more negotiation power to providers
- Changing reimbursement models with increased requirements for reporting on quality metrics

Impact of consolidation on providers

- Referring conglomerates potentially getting bigger with more negotiating powers with hospitals
- Providers will have more choice of national radiology groups but less negotiating power

Prove quality to referring PCPs

PCPs care about the patient experience at the provider

Service expectations for PCPs

Performance expectations

- Referral appropriateness
- Specialist access, communication
- Care coordination
- Subspecialty reads
- Turnaround times
- Error rates



Patient experience expectations

- Access and convenience
- Shared decision-making
- Out-of-pocket expenses
- Clinician attentiveness
- Online scheduling
- Virtual care options
- Reputation
- Specialization

CDS increases appropriateness, shifts volumes

Two impacts of CDS

1 Proven to increase appropriateness

11% → 5.4%

Decrease in frequency of low utility exams ordered¹

2 Expected to impact utilization

Early adopters suggest volumes shift to non-radiation modalities



All Imaging
Slight decrease



CT
Significant decline



MRI
Modest increase



Ultrasound
Potential increase

Steps to measure CDS volume impacts

- ▶ Collect baseline utilization data
- ▶ Obtain real-time organizational CDS data
- ▶ Develop plan to analyze, use data



Resources to guide analysis

- **Measure imaging utilization** with our [ED_HOPD Utilization Benchmark Generators](#)
- **Understand volume shifts** by reading [CDS Volume Impact Analysis](#)

¹) After inpatient CDS implementation in 2014 at University of Virginia Health System.

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Implications for Providers

Congress slows MACRA¹ roll-out

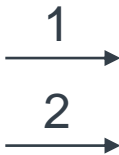
Quality 50% of final MIPS score; rads need to report on up to 6 metrics

Congress grants CMS two new flexibilities to control pace of MIPS roll-out

Under 2018 MACRA rule

CMS must weigh cost category at 30% in 2019

CMS must set 2019 performance threshold at 2018 mean/median



Under Bipartisan Budget Act

CMS can weigh cost category between 10-30% through 2021

CMS can gradually increase performance threshold through 2021

High priority MIPS² quality measures for diagnostic radiology

- 1 Optimizing patient exposure to ionizing radiation: reporting to radiation dose index registry
- 2 Exposure dose of time reported for procedures using fluoroscopy
- 3 Reminder system for screening mammograms
- 4 Cardiac stress imaging not meeting appropriate use criteria: preoperative evaluation in low-risk surgery patients
- 5 Appropriate follow-up imaging for incidental abdominal lesions

Implication for providers

- Likely slows ramp-up of MIPS; provides more transition time for those who need it
- Lower threshold may result in fewer dollars for top MIPS performers, those who have invested heavily in preparation
- Does not change long-term incentives to consider advanced APM participation

1) Medicare Access and CHIP Reauthorization Act.

2) Merit-based Incentive Payment System.

3) Sustainable Growth Rate

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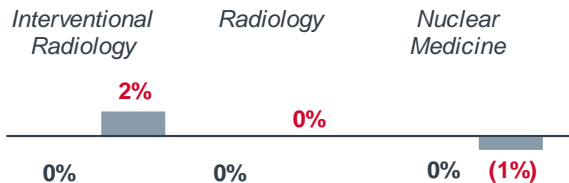
Source: CMS, Medicare Access and CHIP Reauthorization Act; Dickson V, "CMS Will Give Providers Flexibility on MACRA Requirements," *Modern Healthcare*, September 2016; CMS, Medicare Program; CY 2018 Updates to the Quality Payment Program; and Quality Payment Program: Extreme and Uncontrollable Circumstance Policy for the Transition Year, November 2017; Health Care Advisory Board interviews and analysis.

Medicare provider payment updates mixed bag

Interventional radiology payment increases, IDTFs¹ face cut

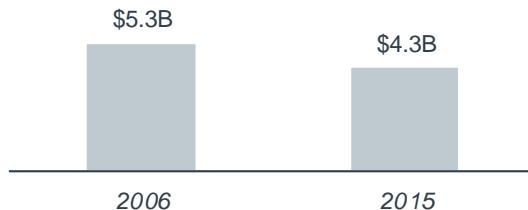
Payment update by specialty

MPFS²

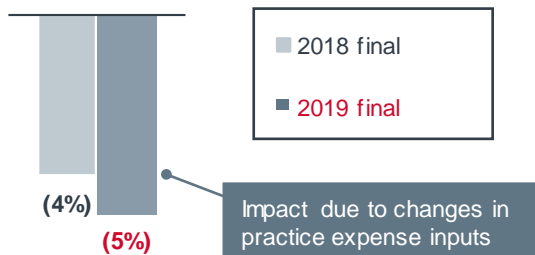


Radiology professional payments declining

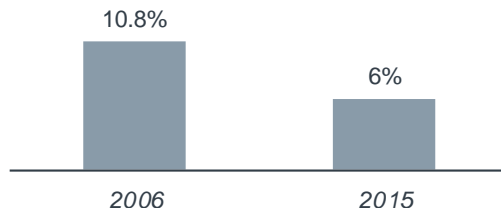
Medicare payments to radiologists for NDI³



Independent diagnostic testing facilities



Percent share of Medicare physician payments attributable to NDI



1) Independent Diagnostic Testing Facilities.

2) Medicare Physician Fee Schedule.

3) Non-invasive Diagnostic Imaging.

Source: Centers for Medicare and Medicaid Services, CMS.gov; Levin D, et al., "The Recent Losses in Medicare Imaging Revenues Experienced by Radiologists, Cardiologists, and Other Physicians," *Journal of the American College of Radiology*, August 2017; Levin D, et al., "The Payment Share of All Medicare Payments to Physicians That Is Attributable to Noninvasive Diagnostic Imaging," *Journal of the American College of Radiology*, February 2018; Imaging Performance Partnership interviews and analysis.

Medicare looks to control imaging via CDS¹

CDS COMPRISED OF TWO COMPONENTS

1 Appropriate Use Criteria (AUC)

- Providers use clinical guidelines created, modified by qualified PLE²s
- CMS releases list of approved PLEs by June 30 annually

2 CDS Mechanism (CDSM)

- Providers use qualified CDSM to comply with mandate
- Official rollout of CDS mandate starts with Jan. 2020 as a one-year testing period with no penalties

INVOLVING TWO KEY PLAYERS



Ordering providers

- Ordering providers, clinical staff consult AUC through CDSM for Medicare patients
- Required for outpatient advanced imaging exams (CT, MRI, PET, nuclear medicine)



Furnishing providers

- Furnishing providers document CDS consultation on Medicare claims
- Reimbursement denials at-risk for failure to submit claims



Quick read: Imaging CDS begins in 2020:
Get the 6 latest updates

1) Clinical decision support.
2) Provider led entities

Site-neutral payments a game-changer for hospitals

CMS expands policy, indicating payment equalization our new reality

Hospital sites meeting three criteria

- 1 Hospital-owned, designated as “off-campus, provider-based sites”
- 2 Located more than 250 yards from hospital’s campus
- 3 Acquired, opened, or built after November 1, 2015

Receive 40% of HOPPS¹ payment



Reimbursed for all services on site-specific MPFS **rate set at 40% of HOPPS payment**

Update: All clinic visits site neutral

HCPCS code G0463² payment cut at all off-campus HOPDs

- Selected due to high HOPD volumes, payment discrepancy, no clinical need for hospital access
- **Two-phase implementation:** 2019 will see 30% cut; 2020 begins full 60% cut (i.e. 40% of HOPPS payment)

Implications for imaging strategy

- **Prepare coders for 2019 changes;** single facility may bill services at different rates
- **Prepare for greater payment equalization;** focus on revenue capture, margins
- **Consider how reduced rates impacts** consumer, freestanding strategy

1) Hospital Outpatient Prospective Payment System.

2) Hospital outpatient clinic visit for assessment and management of a patient.

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Implications for Providers

Respond to access concerns, price transparency

Deliver on top patient preferences

Cost



Patients are keeping tabs on out-of-pocket costs and in-network status. Price plays a huge role in imaging patients' decision-making process.

Talk about money early in the process. Knowing the exact price before the imaging service is almost three times more preferable than getting a price estimate, according to patients.

Cost and access outweigh physician recommendation. While physician recommendation is important when selecting an imaging facility, survey respondents prioritized cost and access over a physician recommendation.

Access

Patients want same-day results. Because waiting for imaging results can be an anxiety-ridden process, prompt turnaround is a significant differentiator

Don't make your patients wait. Whether it is waiting for an appointment, or waiting at your facility to get their scan, patients do not want to wait

When it comes to extended hours, evenings and weekends are equally preferred. Extending business hours is an effective way to appeal to patients' access preferences, expand market share, and increase volumes.

Under value based care, sometimes “less is more”¹

IT solutions can improve efficiency, save costs

1

Educate Physicians on AUC²

- Compiles the most comprehensive evidence-based guidelines for imaging treatment in diagnostic radiology, radiation oncology and interventional radiology

2

Implement CDS³ Tools

- Allows organizations to efficiently control imaging costs by eliminating unnecessary procedures
- Enables providers to make informed decision based on up-to date clinical knowledge at point of order entry

3

Focus on Enterprise imaging

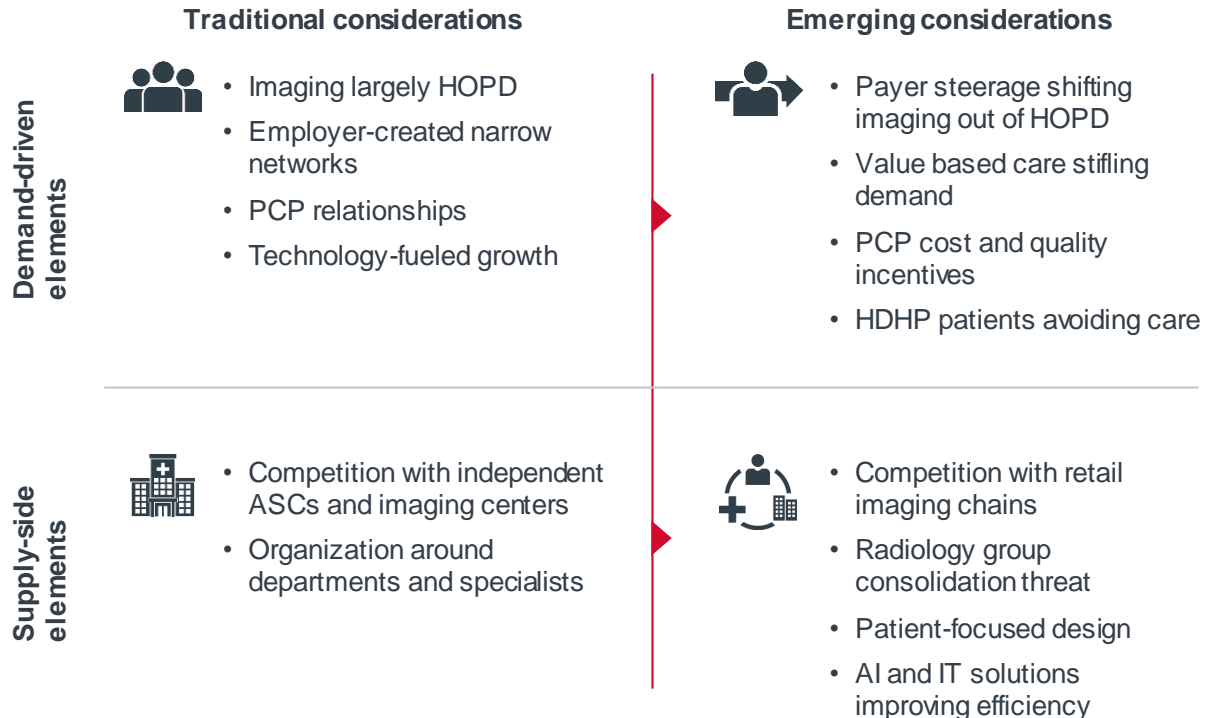
- Interoperable integrated IT solutions can provide immense benefits to imaging
- Unified PACS and vendor-neutral archiving improve quality, efficiency and cost savings due to consolidation of work processes

1) For more information, please refer to our [2017 Diagnostic Imaging Service Line Outlook](#)

2) Appropriate Use Criteria.

3) Clinical Decision Support.

New landscape for service line growth



Preview resources available with membership

Advisory Board members have access to national meetings featuring new research and networking forums, research reports exploring industry trends and proven strategies, on-call expert consultations, forecasting and benchmarking tools, live webconference presentations and an on-demand webconference archive, expert-led presentations on the ground at your organization, and expert blog posts on current health care topics.

Preview a few of the resources we've designed to support imaging leaders.

[National Meeting: 2019 Imaging Performance Partnership Meeting](#)



Join our 2019 National Meeting to push your thinking, learn from imaging colleagues across the country, and take home actionable ideas and tools.

[Calculator/Forecaster: Imaging Price Shift Calculator](#)



Many imaging leaders are evaluating the potential impact of offering more competitive prices in their outpatient facilities. Use this tool to assess the potential impact of two types of price changes on total imaging revenue at your organization.

[Research Report: Advancing Appropriate Use of Imaging](#)



Learn how to curb inappropriate orders through systematic order checks and order-set revisions, ensure appropriate follow-up of incidental findings, and hardwire appropriate imaging in care pathways.



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