eHealth Initiative: Creating a Continuum of Seamless Care
Heart Health

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DISCLOSURES

No financial disclosures

But

I must disclose that I am **VERY HAPPY** to be here with all of you today and have gained a whole new respect for the resting ECG.
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BENEFITTED FROM BOTH CARDIOLOGY AND RADIOLOGY CARE

- **Sequence:**
  - Flat T waves on resting EKG at routine PE – Int. Med.
  - Treadmill stress test w/o imaging - ST segments drop - Cardiology
  - CCTA - “complete” LAD occlusion with collaterals - Radiology
  - Lt. Heart cath – confirmed complete LAD and mild Lt. main - Cardiology
  - Stress cardiac MRI – No infarct but ischemia with stress - cardiology
  - Post bypass CXR - radiology
The Challenge

“Despite wondrous advances in medicine and technology, health care regularly fails at the fundamental job of any business: to reliably deliver what its customers need.”

Lee and Cosgrove
Engaging Doctors in the Healthcare Revolution
HBR June 2014
The Transformation of Diagnostic Radiology in the ACO Era

As healthcare undergoes fundamental redesign organized around increasing the value of care for populations, most of the discussion has focused on primary care and its role in managing the care of these populations. Relatively less attention has been given to specialty care population management, especially for hospital-based specialties such as diagnostic radiology. In radiology, an analysis of such a change is important and similar issues likely apply to other specialist activities as well.

Technological advances in diagnostic radiology have fueled growth in its clinical applications and use. A predictable but unwelcome consequence is that diagnostic radiology has become an important driver of health care costs, creating an apparent dilemma for the specialty. Specifically, should radiologists be advocates of broader use of these potentially life-saving technologies or should they be gatekeepers who take responsibility to control access and costs?

This apparent dilemma creates a false choice for the profession; the former role abdicates the patient care responsibility of the radiologist as a physician, while the latter creates an adversarial relationship between radiologists and other physicians. Rather, radiology and other technologypedependent fields should focus on how to maximize the value of medical imaging (and other tests and procedures) by becoming integrated better into patient care. By being members of care delivery teams, specialists in these disciplines can recommend strategies that maximize the benefits of medical imaging while minimizing the risks and costs.

In a traditional fee-for-service reimbursement environment, the increase in clinical use of diagnostic imaging services coupled with generous payment rates has contributed to substantial growth in the clinical revenues generated by these services. These revenues became important contributors to the financial viability of hospitals and physician practices. However, diagnostic radiology was correspondingly identified as a driver of increased health care costs. In 2006, Iglehart reported services. Insurance coverage of the newest emerging imaging technologies and novel image-guided interventional services has slowed. The combined effect of these actions has been powerful—the utilization and aggregate cost of imaging services peaked in 2008 and have declined substantially from 2009-2013. Despite these reductions, in a fee-for-service payment model, imaging services continue to be a profit center (albeit, a smaller one) for most hospitals and other health care centers.

As part of the national and regional health care reform debates, many leading policy makers have advocated a major shift in the method for payment for medical services—moving away from fee-for-service medicine and toward bundled or capitated payments to hospitals and physicians for managing the health of a defined population of patients. The creation of accountable care organizations (ACOs) is one example of this model of payment. If fully implemented, such a payment system shift would convert diagnostic imaging from a profit center to a cost center. Such a shift would give health systems an economic incentive to reduce further the use of diagnostic imaging and encourage use of potentially less efficacious alternatives.

Many hospitals and physicians who provide diagnostic imaging and image-guided interventional services live in a mixed payer environment, in which some activities are paid on a fee-for-service basis and others become part of risk-based contracting. Both payment models have staying power in the ACOs of the future.

Radiologists and their affiliated institutions, therefore, face a challenging and often paradoxical set of care delivery and margin-generating issues. Tilting in either direction (eg, do more or do less) creates a potentially serious moral and financial dilemma for radiologists and their institutions. Beyond potentially causing operational confusion for both the clinicians and the health system, contradictory financial incentives to do more in a fee-for-service environment vs doing less in a risk-based setting can create an unbridgeable chasm.
The Transformation of Diagnostic Radiology in the ACO Era

As health care undergoes fundamental redesign organized around increasing the value of care for populations, most of the discussion has focused on primary care and its role in managing the health of populations. However, radiology has been an important driver of technological advances in diagnostic radiology that have fueled growth in its clinical applications and use. A predictable but unwanted consequence is that diagnostic radiology has been an important driver of health care costs, creating an apparent dilemma for the specialty. Specifically, should radiologists be advocates of broader use of these potentially life-saving technologies or should they be gatekeepers who take responsibility to control access and costs?

“Technological advances in diagnostic radiology have fueled growth in its clinical applications and use. A predictable but unwanted consequence is that diagnostic radiology has been an important driver of health care costs, creating an apparent dilemma for the specialty. Specifically, should radiologists be advocates of broader use of these potentially life-saving technologies or should they be gatekeepers who take responsibility to control access and costs?”
The Transformation of Diagnostic Radiology in the ACO Era

As health care undergoes fundamental redesign organized around increasing the value of care for populations, most of the discussion has focused on primary care and its role in managing the chronic disease population. These changes have sparked investments in high-value diagnostic and specialty services. Insurance coverage of the newest emerging imaging technologies and novel image-guided interventional services has slowed. The combined effect of these actions has been to reduce the volume of imaging services, to partially offset lower reimbursement for other medical services, and to transform the financial vitality of hospitals and physician practices. However, financial vitality was correspondingly identified as a driver of increased health care costs. In 2006, Iglehart reported that the financial vitality of hospitals and physician practices was a primary driver of health care costs.

"Rather, radiology and other technology-dependent fields should focus on how to maximize the value of medical imaging (and other tests and procedures) by becoming integrated better into patient care. By being members of care delivery teams, specialists in these disciplines can recommend strategies that maximize the benefits of medical imaging while minimizing the risks and costs".
IMAGING 3.0: A NEW APPROACH

Value-Based Imaging Care

3 Key Actions:

Tools

Culture Change

Aligned Incentives

IMAGING 3.0™
Defining Healthcare Value

Value = Outcome

Cost \times \text{Appropriateness}

If appropriateness is low, value is low!
GUIDING APPROPRIATE IMAGING EVALUATION

- Both ACR (24 years) and ACC have been developing Appropriate Use Criteria (AUC) for years
- Needed “point of care” guidance
- PAMA 2014 Mandates AUC consultation
- Both ACR and ACC have been approved as “qualified Provider Led Entities”
- Both sets of AUC in widespread use but waiting final CMS implementation 1/1/19
**IMAGING3.0™**

**Radiologists Responsible for all Aspects of Imaging Care**

**Appropriate Use of Imaging**
- Disease Detection
- Population Health

**Clinical Decision Support**

**Patient Education**

**Appropriate Screening of Records and Past Exams**

**Narrative Reports**

**Interpret**

**Image**

**Protocol**

**Report**

**Order**

**PACS**

**Digital Modalities**

**Radiologist**

**Technologist**
WEB-BASED USER INTERFACE

Developed From The ACR Appropriateness Criteria

Welcome Dr. Thorwarth

Initiate Consultation With Radiologist

Radiologists Help Assure Correct Test Is Ordered
WORKFLOW INTEGRATION – EPIC
97% of AC developed guidelines are informed by Category 1 or Category 2 references.

3% informed by only Category 3 references.

None informed by only Category 4 references.
Decision support tools and knowledge management systems can be included routinely in health care delivery to ensure that decisions are informed by the best evidence.
CAD-RADS™: Coronary Artery Disease – Reporting and Data System

An Expert Consensus Document of the Society of Cardiovascular Computed Tomography (SCCT), the American College of Radiology (ACR) and the North American Society for Cardiovascular Imaging (NASCIS). Endorsed by the American College of Cardiology

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SUMMARY

- Appropriate use of imaging is the objective of all
- Both radiology (ACR) and cardiology (ACC) have prioritized this effort
- Guidance to evidence based recommendations must be seamless at point of care
- Reporting must also be standardized to provide consistent actionable recommendations.
THANKS

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