

Value-Based Radiology

An Imperative to Revolutionize Patient Care



Executive Summary



CANDESCANT HEALTH

Introduction

Radiology is one of the most strategic and expensive clinical functions in health care. Yet in today's fee-for-service framework, radiologists can't always guarantee the level of care required to optimize patient outcomes.

The emergent value-based model promises a different world for radiology.

Throughout the United States, radiologists are awakening to an unprecedented opportunity to build a new model of radiology—one that will help to capture billions of dollars' worth of value. In the next few years radiologists will blaze the trail. They will do this by embracing these four imperatives:

1. Hold radiology accountable to a national performance standard.
2. Massively increase efficiency.
3. Deepen clinical integration.
4. Negotiate risk contracts to gain a share of the value created.

Value-based care aims to improve the health care value ratio: outcomes per dollar spent. In that equation, radiology is a crucial lever. If managed to a high level, radiology can vastly improve patient care, and the U.S. health system has the potential to save more than \$39 billion per year.¹

Economically speaking, radiologists will be able to capture a portion of the value they create in the form of improved profitability. But first, the challenges of the current model of radiology must be addressed.

The Fading Model

The current model of radiology delivery is severely flawed. Clinical variation, misdiagnosis, overutilization, and the declining status of the radiology profession tell the story of a business model that is rapidly going extinct.

The eagle's-eye view of radiology within U.S. health systems reveals alarming clinical variation, which is associated with dismal rates of misdiagnosis and overutilization. The availability of subspecialists, the number and types of tests performed, the access radiologists have to vital clinical data and previous films, the use of peer reviews, the quality of reports, and turnaround times (TATs)—all of these important metrics of radiology vary greatly. Wide clinical variability and lack of transparency manifest in misdiagnosis, waste, poor patient care and a higher total cost of health care. Like putting the wrong type of oil—or too much—into a car, variability and lack of transparency are causing the health care engine to “smoke” and its performance to degrade.

Perhaps chief among the manifestations of clinical variation are diagnostic errors. Diagnostic accuracy and errors vary widely, contributing to the estimated 40,000 to 80,000 preventable deaths caused by misdiagnosis annually in U.S. hospitals alone, according to a study by the Society for Medical Decision Making.²

Misdiagnosis in radiology is largely due to a lack of scale to ensure availability of subspecialists. Scott Atlas, MD, senior fellow at Stanford University's Hoover Institution, notes that radiology is an outlier in this respect. It's like having a general surgeon operate on a person with a brain tumor, or an oncologist treat epilepsy, he writes in the *Journal of the American College of Radiology*. "The vulnerability of the practice of radiology lies in the failure of clinical radiology practices to fully implement subspecialty practice."³

Another manifestation of clinical variation is overutilization. Imaging exams comprise four out of the top five unnecessary medical procedures in the ED, according to a study published in the *Journal of the American Medical Association*.⁴ As observed by cardiologist Rita Redberg, MD and radiologist Rebecca Smith-Bindman, MD at the University of California, San Francisco Medical Center, "There is distressingly little evidence of better health outcomes associated with the current high rate of scans. There is, however, evidence of its harms."⁵

Meanwhile, business is getting tough for radiologists. After years of enjoying high incomes, the nation's nearly 30,000 radiologists⁶ and 3,000 radiology groups⁷ are experiencing a steep decline in annual Medicare reimbursement. At the same time, with the rise of radiology benefits management (RBM) programs, radiologists are seeing their decision-making autonomy slip through their hands.

Radiology groups are beginning to respond to these challenges through measures such as the American College of Radiology (ACR) Imaging 3.0 initiative, developing structured radiology reports to improve consistency and efficiency, and consolidating radiology groups for greater scale.

But it will take more than a piecemeal approach for radiologists to thrive in a value-based world. Only those who fully embrace the transition to value-based radiology will empower themselves to optimize patient care and cost, improve profitability, and enhance the stature and influence of the profession.

The Revolution

To seize a leadership role in value-based care, radiologists must act upon four imperatives: hold themselves accountable to national standards, become extremely efficient, clinically integrate, and forge value-based (otherwise known as risk-based) contracts with health systems.

To date there is still no established set of standard best practices that radiologists, patients, health systems, and payers can use to gauge the quality of their radiology services. This is

about to change drastically. The U.S. health care system is demanding value, and the time is now for radiologists to prepare and to lead.

In addition to performing to a national standard, high performing radiology groups will contribute to reducing per-unit costs. This requires instituting proven measures such as standardizing reports, ensuring that radiologists have access to all information and previous tests they need for quick and accurate readings, and having a care management center to facilitate communication with referring physicians and to complete other non-specialist tasks.

The third imperative for radiologists, clinical integration, suggests that radiologists should be involved in the whole disease episode. Radiologists should assume the role of consultant early on in the patient care process, starting with providing referring physicians with real-time consultations to determine if, how, and when to order imaging tests. They should also have full view of analytics to understand their performance against standards and peers and realize their personal contributions to the health care team in reducing costs and improving value.

The final imperative is that radiologists must begin to actively pursue and develop risk-based contracts with health systems so they can gain a portion of the savings from the value they create. By embedding remuneration for value creation within contracts, radiologists will enable value-based radiology to flourish and will increase profitability.

The Journey

After gaining an understanding of the imperatives of value-based radiology, where do radiologists and health systems begin?

The journey to building the value-based radiology model of the future starts with engaging all stakeholders, establishing a comprehensive set of system-wide radiology performance standards, and creating transparency into performance. The next steps are to apply workflow interventions to improve performance against standards and boost radiologist throughput, clinically integrate radiologists, and develop risk-based contracts to align incentives with value-based patient care.

Value-based radiology is not simply a professional challenge; it is a quality and cost imperative. It is the clear path to providing superior care and for radiologists to prosper in a value-based world.

Download the full white paper for:

- Close examination of the opportunity for radiologists to generate and capture value
- References to latest studies on overutilization and misdiagnosis
- Details on the four imperatives for radiologists

- The five step journey to value-based radiology for radiologists and health systems
- Charts illustrating the fading model, the new value-based model, and the journey

About Candescent Health

Candescent Health's mission is to make healthcare dramatically more efficient and effective by enabling and empowering the providers who are transforming healthcare, starting with radiology. Based on a decade of operating one of the nation's largest multi-practice radiology groups, Candescent Health has reengineered clinical and workflow processes to fundamentally transform the radiology care delivery model and enable radiologists to improve quality, increase productivity and lower costs. Headquartered in the Boston area and with a major operations center in Cleveland, Candescent Health is backed by leading venture capital firms. For more information, visit www.CandescentHealth.com.

¹ Neal E, Pratt A, Yasinow A. Potential PMPM gains for the U.S. health system through reduction of downstream costs caused by misdiagnosis and overutilization of medical imaging [unpublished data]. Beachwood, OH: Candescent Health. 2014.

² Saber-Tehrani AS, Lee HW, Matthews SC, et al. 20-year summary of US malpractice claims for diagnostic errors from 1985-2005. (abstr) Proceedings of the fourth annual diagnostic error in medicine conference. Chicago, IL: Johns Hopkins University School of Medicine, 2011 [online]

³ Atlas SW. Embracing subspecialization: The key to the survival of radiology. *J Am Coll Radiol*. 2007; 4 (11):752-753. [online]

⁴ Schuur JD, Carney DP, Lyn ET, Raja AS, Michael JA, Ross NG, Venkatesh AK. A top-five list for emergency medicine: A pilot project to improve the value of emergency care. *JAMA Intern Med*. 2014 Feb 17. [Epub ahead of print] [online]

⁵ Redberg R, Smith-Bindmanjan R. We are giving ourselves cancer. *New York Times*. January 20, 2014. [online]

⁶ 2012 Physician Specialty Data Book. Association of American Medical Colleges, November 2012. [online]

⁷ Bansal S, Sunshine J. Basic characteristics of radiology groups in the United States: results of a 1991-1992 census. *Am. J. Roentgenol*. February 1994; 162. [online]