

The New Healthcare Delivery Environment And Academic Radiology

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Abstract

Large-scale changes in the way health care is provided and paid for in the US are being driven by ongoing concerns about the skyrocketing cost of healthcare. Academic medical institutions will need to adjust their institutional cultures, financial and business models, and strategies for thriving in this new health care delivery environment. In this paper, we examine what academic radiology departments anticipate from the new health care environment. Background information on Accountable Care Organizations, difficulties with the new managed care model, and important tactics—such as maximizing the use of already-existing IT infrastructure, encouraging ongoing medical innovation, striking a balance between clinical and academic research, and investigating new roles for radiologists in effective patient management—will all be covered in this review.

Keywords: Academic Radiology, accountable care organization, research, informatics, quality, value.

Introduction

Concerns regarding the viability of the US healthcare system's current state have arisen due to the country's aging population and ongoing health care spending growth. Over the past fifty years, health spending has increased significantly (17.4% of GDP, up from 11.4% in Canada in 2009). In contrast, U.S. health performance is inferior when measured by factors like life expectancy, quality, access, efficiency, and equity. The Institute of Medicine (IOM) panel discussion in 2010 was sparked by the failure to align cost and performance. The prevalence of chronic disease, lifestyle, population health demographics (such as the obesity epidemic), as well as inefficient service delivery (excess administrative costs, unnecessary services, etc.) were among the factors the IOM identified as contributing to the cost-performance nonalignment (Fineberg, 2012).

This paper aims to provide a broad overview of the new health care delivery environment, with a focus on academic medical institutions and its expected implications for the field of radiology. The history of Accountable Care Organizations, the difficulties of the new managed care environment, the use of technology to manage data-intensive environments, the role of radiologists in medical innovation, the establishment of new roles and boundaries for radiology in patient management, and the ramifications of striking a balance between clinical care and academics will all be covered in our review.

The Affordable Care Act and Patient Protection:

The foundation of payment reform is the idea that the existing fee-for-service payment system encourages doctors to provide more services, leading to overuse. Targeting subspecialist physicians, such as radiologists, and procedure-centric physicians, like interventional cardiologists or gastroenterologists, has resulted from an overuse of subspecialty services in comparison to the perceived appropriate level of management in the primary care setting. Several payment models, ranging from prospective payment for discrete episodes of care to global payment or risk-based care, have been proposed in an effort to prevent the overuse of imaging and subspecialist referral (Davis, 2010).

Direct Methods of Lowering Reimbursement:

A crucial component of managed care schemes that reached their zenith in the 1990s was global prospective payments. On the other hand, unpopular limitations on service choice and access prevented the expected payment capitations from occurring. More than ten years later, worries about the mismatch between health care costs and quality have rekindled interest in international payment models, partly due to the Patient Protection and Affordable Care Act (ACA) of 2010's introduction of Accountable Care Organizations (ACOs). The ACA also directly addresses the cost of imaging services under the current fee-for-service model by reducing the amount paid for multiple procedures and raising "assumed utilization rates."

Organizations that Provide Accountable Care:

Although the ACA does not mention ACOs in relation to medical imaging, they could have the biggest influence on radiology practice going forward. ACOs are networks of doctors and other healthcare professionals that collaborate to lower costs and enhance the quality of care for a specific patient population. At least five hundred Medicare beneficiaries can be served by primary care physicians who make up the ACO. It is possible to hire hospitals and specialists. It is necessary to provide evidence for evidence-based medicine, cost and quality control strategies, and coordinated care. Radiologists and other practitioners are not required to collaborate only with an ACO (Yong PL., 2010).

Health IT: A Crucial Aspect of Data Administration:

Over the last two decades, medicine has undergone a significant shift towards a more intricate and data-driven care model. The scientific advancements in medical imaging, genomics, laboratory and pathological diagnostics, updated health care IT infrastructure, and cultural shifts in medicine toward evidence-based decision-making are some of the distinct but interconnected trends contributing to these rapid changes. The clinical practice of medicine has changed as a result of the abundance of data. Nowadays, breast cancer can be classified into subtypes based on genetics, tissue type, and spread extent. There are also numerous therapy options for each subtype. Patient information is now considered patient management in this new paradigm.

Modern health care has undergone significant change thanks in large part to the development of health information management technologies like Electronic Medical Records (EMR), Radiology Information Systems (RIS), and Picture Archiving and Communication Systems (PACS). The Health Information Technology for Economic and Clinical Health (HITECH) Act of 2009 has accelerated the improvement of IT infrastructure by providing incentives for the adoption and use of electronic health records to promote the exchange of health information (Fisher , 2003).

Research and Innovation in Radiology:

Radiology's value will be preserved and increased in the future healthcare environment if innovation and advancement in the field are consistently prioritized. Sustained innovation in radiology can be validated by developments in diagnostic modalities, novel imaging techniques, and minimally invasive, image-guided therapeutic procedures, among other areas. However, dwindling funding for the creation of new imaging technologies combined with a health care system that is becoming more cost-conscious means that both clinical application and research development of radiology innovation will probably be financially constrained. There must be a compelling case for ongoing imaging research in a system with limited resources

(McCarthy , 2009). In order to determine the true benefits of these innovations and demonstrate the clinical value of new imaging techniques, rigorous comparative effectiveness research must be conducted.

Redefining the Boundaries of Radiology:

Due to the limitations of early imaging equipment's immobility and the need for hard copy images, radiologists were the only ones qualified to interpret images for many years. But eventually, technological advancements leveled the playing field in medical imaging: many imaging devices became portable, and images could be transmitted instantly over PACS. As imaging became the primary diagnostic and therapeutic tool, other specialties started performing and interpreting imaging exams. In certain places, these modifications have resulted in disputes between radiology and non-radiology departments. Though it is arguable that imaging interpretations produced by radiology departments offer better care at a lower cost than imaging carried out by non-radiology specialists, the lines between specializations have become more hazy due to competition between closely related disciplines, and this trend is probably going to continue. Thus, radiologists would be better served by concentrating more on improving their ability to navigate these boundaries and less on truly winning the turf war (Moser ,2006).

Recommendations:

Today's radiologists work under a very ineffective spoke-and-wheel referral model, wherein a patient is referred by a primary care physician for radiologic evaluation; imaging results and management recommendations are sent back to the requesting physician; the primary care physician then refers the patient for specialist care; and the specialists follow up with the radiologist to discuss the study's findings.

The radiologist is in a unique position to offer these suggestions, direct patient referrals when necessary, and guarantee that all lines of communication between various healthcare teams are closed. In addition to improving the quality and yield of specialty referrals, radiologist-managed patient referral guidance also supports the broader trend toward primary care physicians managing patient care, even though they may not be as knowledgeable about uncommon illnesses and injuries. However, by augmenting their knowledge with that of a subspecialized radiologist, primary care physicians may still be able to manage patient care effectively.

Conclusion:

As a specialty, we must acknowledge the necessity of redefining our field as we look to the future. It is critical that members of our profession comprehend the obstacles that have led to this situation as well as the shifting dynamics of the modern healthcare environment, beginning with the trainee level. In addition to pushing the boundaries of our profession to include more areas of patient care, radiologists must continue to innovate in the diagnosis and treatment of illness. We hope that those looking to take their

first brave steps into the future will find some guidance in this review.

References:

1. Fineberg HV. Shattuck Lecture. A successful and sustainable health system--how to get there from here. *N Engl J Med*. 2012;366(11):1020–7.
2. Davis KSC, Stremikis K. *Mirror, mirror on the wall: how the performance of the US health care system compares internationally*. New York: Commonwealth Fund; 2010.
3. Yong PL, Saunders RS, Olsen LA, editors. *The Healthcare Imperative: Lowering Costs and Improving Outcomes: Workshop Series Summary*. Washington (DC): 2010.
4. McCarthy DHS, Schoen C, Cantor JC, Belloff D. *Aiming higher: results from a state scorecard on health system performance*. 2009.
5. Fisher ES, Wennberg DE, Stukel TA, et al. The implications of regional variations in Medicare spending. Part 1: the content, quality, and accessibility of care. *Ann Intern Med*. 2003;138(4):273–87.
6. Landon BE. Keeping score under a global payment system. *N Engl J Med*. 2012;366(5):393–5.
7. Payment Policies Under the Physician Fee Schedule, Five-Year Review of Work Relative Value Units, Clinical Laboratory Fee Schedule: Signature on Requisition, and Other Revisions to Part B for CY 2012. *Federal Register*. 76(288) Final Rule.
8. Moser JW, Wilcox PA, Bjork SS, et al. Pay for performance in radiology: ACR white paper. *J Am Coll Radiol*. 2006;3(9):650–64.
9. McVey LR. Pay-for-performance radiology: a new concept. *Radiol Manage*. 1999;21(3):18–21.
10. Allen B, Jr, Levin DC, Brant-Zawadzki M, et al. ACR white paper: Strategies for radiologists in the era of health care reform and accountable care organizations: a report from the ACR Future Trends Committee. *J Am Coll Radiol*. 2011;8(5):309–17.
11. Becker GJ, Bosma JL, Burleson J, et al. Introduction to value-based payment modifiers. *J Am Coll Radiol*. 2012;9(10):718–24.