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Introduction: Quality in Diagnostic Imaging: Learning From Worldwide Initiatives

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In the United States, the Institute of Medicine's focus on patient safety and quality care, as well as CMS's drive toward the development of metrics for pay for performance, has renewed emphasis on improving the quality of patient care in imaging and maximizing patient outcomes for limited resources. This special issue of *JACR* presents global initiatives in the provision of quality imaging care, some of which may serve as guide posts for US-based initiatives.

The current emphasis on pay for performance highlights the importance of physician patterns as drivers of utilization, particularly in a more capitalistic model of health care provision. Nevertheless, even in countries with national health insurance, monetary incentives remain important drivers. In this issue, Shaw and Upponi describe the genesis and current structure of the National Health Service in the United Kingdom and highlight methods to foster internal competition and structure remunerations and incentives.

The 4 cornerstones of value-driven health care are health IT, quality, price, and incentives, and they highlight areas in which improvements in care can be made. The most visible efforts to integrate health IT systems into radiology practice are radiology information systems and PACS, electronic order entry, and electronic medical records. Electronic medical records themselves integrate myriad patient-level data, from insurance coverage, outpatient visit notes, and laboratory data to informed consent documentation and advance care directives. Electronic order entry systems are being actively explored as mechanisms for delivering evidence-based guidelines on imaging service referral. Attempts to exploit the richness of the data in electronic medical records have led to diverse quality initiatives. For example, the measurement of benchmark group practice and individual physician behavior leads to decreased practice heterogeneity and potential cost savings. In imaging, radiologist referral for additional imaging within a practice has been benchmarked and deviation from benchmark referral rates documented for individual radiologists [1]. Additionally, decision support has been integrated into a computerized order entry system in an effort to decrease outpatient procedure volume [2]. Also in this issue, Zalis and Harris describe a method that

exploits electronic medical records to facilitate information retrieval before and during image interpretation by radiologists.

Improving care provision in imaging includes improving access, safety, and efficiency. Kielar et al describe the Ontario Wait Times Initiative to improve equitable access. Jones et al summarize worldwide efforts to establish national medical imaging incident reporting systems and review the results of the Australian Radiology Events Register. Elshaug et al discuss the implications for comparative effectiveness research in addressing waste in diagnostic imaging.

Closer to home, current radiology practice relies on a consultancy model in which referring physicians are often considered the consumers. Therefore, many of the current metrics of quality imaging service evaluate criteria important to this stakeholder group, metrics such as report quality [3,4], report turnaround time, ease of appointment scheduling, and radiation safety. In this issue, Pool and Goergen review the literature on the factors influencing the quality of written radiology reports, and Wallace et al report on a 10-institution initiative to optimize multidetector CT dose.

One criticism of applying lessons learned from non-US health systems is the underlying differences in health care coverage, with most developed non-US countries providing care under national health insurance plans. Nonetheless, these countries face the same economic and demographic pressures the United States faces, including the spiraling cost of care and an aging population. Nowhere is this more evident than for Medicare, our closest analogue of a national health plan. Current calls for health care reform make some form of national coverage highly likely. The successes and failures of care initiatives developed in countries with this type of health care environment may provide valuable insights for future policymaking and quality improvement initiatives.

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