

Radiology Research Alliance Guest Editorial Centering the Patient in Radiology Research

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Dr. Zygmunt and colleagues (1) have provided a timely special report in this issue of *Academic Radiology* describing the opportunities for patient-centered outcomes research in radiology provided by the Patient-Centered Outcomes Research Institute (PCORI). The special report ably summarizes the opportunities for radiology research in the framework of PCORI, with key insights regarding the focus and methodology developed by PCORI. This special report is a critical tool to aid radiology research leaders navigating the rapidly evolving patient-centered healthcare environment.

The PCORI mission statement (2) frames the pivot from researcher-centered research to patient-centered research:

“PCORI helps people make informed healthcare decisions, and improves healthcare delivery and outcomes, by producing and promoting high-integrity, evidence-based information that comes from research guided by patients, caregivers, and the broader healthcare community.”

PCORI fosters patient-centered comparative effectiveness research with a relentless focus on patient and caregiver engagement. For a research proposal to be highly ranked by the PCORI reviewers, patients and caregiver stakeholders must be fully engaged throughout the research cycle: from development of research topics and questions, through creation of research methodology, acquisition of data, analysis, through dissemination and communication of research study findings to healthcare providers and affected patients and stakeholders. During my service as PCORI Merit Reviewer, I was impressed by the relentless focus of the PCORI reviewer panels on strong, effective patient and caregiver engagement from the beginning of a research proposal to the planned dissemination of results. Successful PCORI project proposals are extraordinarily patient centric and caregiver centric in their development, execution, and dissemination of results.

Patients, caregivers, and other public stakeholders are at the center of the PCORI process, assisted by healthcare providers and researchers. The pivot of the patient to the center of healthcare decision-making is a manifestation of

the evolving healthcare consumerism movement in the United States.

Consumerism has several divergent, conflicting definitions. One common definition is that consumerism is the social order promoting the greedy collection and acquisition of products and services, frequently termed economic materialism. In this context, consumerism is considered a marketing-driven economic force that harms society and discourages generosity and altruism by tapping into the conscious and unconscious needs of people through manipulative marketing. A less pejorative definition defines consumerism as a form of capitalism where the consumer is the principle driver of the market economy. Products and services are developed to meet consumers' needs and desires. Successful providers in this model meet the evolving needs and desires of their client consumers.

Healthcare consumerism is the social and marketplace order where the healthcare market evolves to meet the needs of patients and caregivers. In this context, consumerism is a social and economic movement where the patient-consumer sits at the center of the economic transaction. Effective, efficient consumerism requires a relatively transparent marketplace where consumers can exercise informed decisions regarding the acquisition of services and consumption of products produced by suppliers and providers in response to their needs and desires.

In this context, healthcare consumerism is a social and economic movement where patients and their caregivers define and exercise their healthcare decisions in partnership with physicians, nurses, and other healthcare providers. The goal is to enable patients and their caregivers to be better informed regarding healthcare decisions and consequences and be more actively engaged in their treatment and decision process. The challenge is to meet the consumerism market forces while improving patient and population health outcomes. Patient needs and desires may conflict with optimal patient and population health outcomes. The challenge to be resolved is the tension between the patient-centered focus of consumer-driven health care and the evolution of managed healthcare competition, which is provider centric (3).

Consumerism as an economic force has transformed and disrupted banking, finance, travel, media, and entertainment service industries. Before the 1980s, a bank customer had to visit a bank building and interact with a teller or other bank officers to establish an account, cash and/or deposit checks, transfer or withdraw funds in different checking and savings accounts, check account balances, or make loan applications. If the bank was

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closed, these services were not available. These key services were available 5 hours a day, weekdays only.

During the 1960s, automated teller machines (ATMs) were developed to meet customer needs and desires to make transactions 24/7/365. Networked ATMs capable of receiving deposits, dispensing cash, and transferring funds between accounts were deployed in the 1970s and early 1980s. More recently, smartphone applications are replacing ATM functionality. Bank customers no longer need to visit a brick and mortar bank, nor directly interact with a bank employee to meet all of their bank service needs. The consumerism movement, catalyzed by the technology tools of the Internet, smartphone applications, and the ubiquitous availability of ATMs, has disrupted and transformed the banking industry. Similar transformation and disruption has occurred in finance, media, entertainment, and travel service industries.

US health care is encountering similar disruptive and transformative pressures driven by healthcare consumerism, accelerated by the Internet and evolving healthcare applications deployed to smartphones and associated sensors. Healthcare providers must learn to respond to this sea change in US health care. Patients and their caregivers, the ultimate consumers of healthcare services, will insist on customer-friendly, information-rich, convenient, efficient, and effective interactions with healthcare providers. In this context, a provider may not be a physician or other traditional healthcare provider. Patients will likely use an app or visit a provider online to meet their healthcare needs.

The consumerism movement is coming late to health care compared to other service industries. One cause for the delay of consumerism in US health care has been the separation between payer, provider, and patient consumer by the triangle financial transaction paths between employers and insurance providers, physicians and other healthcare suppliers, and patients. Economic marketplaces function more efficiently when the transaction is more directly between the consumer (patients and their caregivers) and the provider of healthcare services. The recent advent of high deductible, high co-pay insurance products has created a strong economic incentive for patients to become more engaged and more knowledgeable regarding their healthcare decisions (4).

Another challenge to healthcare consumerism is the information asymmetry between patients and professional providers. This information gap is being filled rapidly by technology applications and services. An engaged patient has access to extensive information resources available on her smartphone: customer satisfaction scores of physicians and hospitals, outcome metric scores on competing hospital enterprises, and lists of differential diagnoses and corresponding treatment outcomes correlated with his or her symptoms.

The US health care's consumerism movement will drive disruptive innovation through the healthcare environment. Patients and caregivers will be less interested in visiting brick and mortar offices and clinics, to wait many hours to consult with physicians and other providers, who appear to be functioning as data entry clerks rather than engaged partners and guides. The power of the Internet, robust search algorithms, and complex healthcare research and healthcare knowledge databases will combine with the smartphone and other sensors to disrupt traditional healthcare practices and paternalistic patient-provider relationships. Value-based medicine, patient-centered care, and open access to medical knowledge will transform US healthcare processes (5).

Radiology is integral to modern health care, impacting the diagnosis and treatment of injury and disease and subsequent monitoring of outcomes. For radiology to successfully navigate the evolving disruptive consumerism and technology forces impacting US health care, radiology must actively engage patients through education and outreach. The traditional physician-to-physician consulting model of radiology will be disrupted. Radiology leaders must pivot to a more directly patient-centered care model to increase the value of imaging to the healthcare enterprise and counter the threat of imaging commoditization (6).

Transformative innovation is challenging. Successful radiology innovation will require effective comparative effectiveness research. Radiology research leaders and innovators must embrace patient-centered outcomes research to guide innovative solutions. I applaud Dr. Zygmunt and his team for charting the opportunities for radiology in patient-centered outcomes research within the PCORI framework. Future radiology patient-centered outcomes research findings will guide innovative radiology leaders in partnership with patients and caregivers through the transformation of radiology into a patient-centered, high value-added element of US health care.

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