

Professionalism in Radiology

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Abstract: Professionalism has been described as the “basis of medicine’s contract with society.” This article reviews the foundational principles of medical professionalism and, more specifically, defines the nature and scope of radiologists’ responsibilities to patients. In the face of ongoing changes in the environment of medical practice, maintenance of professionalism is an adaptive challenge that will require successful practitioners to be open to and actively engaged in continuous learning and self-improvement. Imaging 3.0 is a change process developed by the American College of Radiology to help radiologists redefine and reprioritize their professional activities as the discipline transitions from a volume-based to value-based specialty.

Key Words: professional practice/standards, radiology, ethics

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LEARNING OBJECTIVES

After participating in this SA-CME activity, the physician should be able to:

1. Define professionalism and how it applies to radiology.
2. Assess how radiologists’ active participation in initiatives such as *Choosing Wisely* and Imaging 3.0 can improve patient care.
3. Identify resources for improving one’s own knowledge of professionalism.

INTRODUCTION

A profession is distinguished from other occupations by intellectual, moral, and organizational hallmarks.¹ As professionals, physicians are required to master a complex and ever-growing body of knowledge that is judiciously applied to maintain or improve the health of patients while minimizing the deleterious effects of medical interventions. Physicians have an ethical responsibility to use their expertise and skills in the best interest of patients and to avoid conflicts of interest that may influence their decision-making. Finally, physicians practice with colleagues within self-imposed and largely self-regulated organizational structures that establish and maintain standards for practice and quality of care.

PROFESSIONALISM

Medical professionalism, in turn, can be broadly defined as “a set of core beliefs and values that guide the daily work of physicians” caring for patients.² In 2002, the

American Board of Internal Medicine (ABIM), the American College of Physicians-American Society of Internal Medicine, and the European Federation of Internal Medicine published their highly influential Charter on Medical Professionalism,³ which sought to explicitly define and reaffirm medical professionalism for the 21st century. Three fundamental principles (primacy of patient welfare, patient autonomy, and social justice) form the basis for the charter, which also includes a set of definitive professional responsibilities in the form of 10 commitments (Table 1). Since publication, the Charter has been endorsed by >130 organizations including the American Board of Radiology (ABR), the American College of Radiology (ACR), and the Radiological Society of North America.⁴

More specific to the imaging community, the ACR Code of Ethics⁵ serves as a guiding framework by which radiologists may determine the propriety of their professional conduct. This Code is divided into 2 parts: principles of ethics that are considered as aspirational goals and rules of ethics that are mandatory and directive of minimal standards of conduct. While largely overlapping with the principles and commitments of the 2002 ABIM Charter, the ACR Code also emphasizes the importance of quality assurance, technology assessment, and utilization review as core radiologist responsibilities. Cited examples of conduct considered potentially in violation of the rules of ethics include ownership interests in imaging facilities serving patients “self-referred” by colleagues with incentives for financial gain, biased or inaccurate expert witness testimony, and false advertising of services. In 2013, the Society of Thoracic Radiology adopted its own Code of Ethics (Table 2) that again reaffirms the principles of primacy of patient welfare and patient autonomy and emphasizes the importance of honesty and integrity in all professional activities.

For physicians-in-training, the Accreditation Council for Graduate Medical Education lists professionalism of 1 of the 6 general competencies that must be acquired before graduation. Donnelly and Strife⁶ have reported on their initial experience in implementing an educational program to promote professionalism and effective communication in their academic pediatric Radiology department; important components identified in this program include leadership setting clear expectations for physician behavior and regular feedback from referring physicians, patients, and patients’ families on quality of professional interactions. In addition to monitoring compliance with defined standards of behavior, education of professionalism ideally should also result in the internalization of values that will guide behavior beyond the training period.⁷ Effective teaching of important abstract concepts such as altruism and integrity can occur in the form of didactic lectures, web-based learning modules, interactive sessions such as discussion groups, and, most importantly, role-modeling in which learners directly observe and adopt the attitudes and behaviors of their role models.⁸

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TABLE 1. Physician Charter on Medical Professionalism

Professional Responsibilities	
1.	Commitment to professional competence
2.	Commitment to honesty with patients
3.	Commitment to patient confidentiality
4.	Commitment to maintaining appropriate relations with patients
5.	Commitment to improving quality of care
6.	Commitment to improving access to care
7.	Commitment to a just distribution of finite resources
8.	Commitment to scientific knowledge
9.	Commitment to maintaining trust by managing conflicts of interests
10.	Commitment to professional responsibilities

For practicing radiologists, maintenance of professionalism throughout a decades-long career poses an adaptive challenge due to unrelenting changes in biomedical, social, political, and economic health care environments that require successful practitioners to be flexible and actively engaged in continuous learning and self-improvement.² Educational resources in the form of online modules on ethics and professionalism in the practice of radiology have been developed by the ABR Foundation to aid in this endeavor and are available for review and continuing medical education (CME) credit at Radiological Society of North America’s Online Library website.

ETHICAL RESPONSIBILITIES

John David Armstrong⁹ provides a thoughtful discussion on the nature and scope of radiologists’ responsibilities to patients. In his conceptual framework, these responsibilities can be decomposed into 7 discrete elements: appropriateness of imaging examinations; informed consent; patient protection; image interpretation; communication with patients and physicians; continuous learning; and continuous quality improvement. Armstrong specifically warns against a potential vulnerability for radiologists whose practices may largely or entirely consist of caring for patients that present only in the form of images. Images considered in isolation, as “ends in themselves” without representational connection to the sick patient, may undermine a radiologist’s sense of professional responsibility. Constant mindfulness of the suffering person

TABLE 2. STR Code of Ethics

Standards of Conduct	
1.	Dedication to providing the highest quality of medical care
2.	Honesty and integrity in all activities including <ul style="list-style-type: none"> a. Interactions with patients b. Interactions with colleagues c. Performance of research and scholarly activity d. Respect for intellectual property e. Provision of accurate expert opinion and testimony based on existing knowledge and expertise
3.	Respect for patient’s rights, including privacy
4.	Respect for and adherence to the law of the land
5.	Continuous professional improvement
6.	Participation in research and educational activities to further the advancement of the subspecialty and of medicine as a whole for the benefit of all persons

represented on images requires that each step in the discharge of a radiologist’s responsibilities be performed with unwavering focus on patient well-being and with patient benefit being the overarching goal for all professional endeavors.

EVOLVING PROFESSIONAL ROLE

Since the publication of the Institute of Medicine’s 1999 report *To Err Is Human: Building a Safer Health System*,¹⁰ widespread initiatives aimed at improving the quality and safety of medical care have resulted in fundamental changes in radiology practices ranging from adoption of picture archiving and communication systems to legislated requirements for reporting of radiation doses associated with computed tomography (CT). The major professional challenge anticipated over the next decade will be for physicians to grapple ethically with the resource constraints increasingly affecting health care systems, particularly in light of the expanded pool of covered individuals enabled by the Patient Protection and Affordability Care Act.⁴

The issues of appropriate utilization and just allocation of scarce health resources are particularly relevant to radiologists who serve as stewards of expensive and high-tech diagnostic equipment. With utilization of imaging studies growing faster than any other physician service provided to the Medicare population in the period 2000 to 2007, concerns regarding their value have been raised by influential groups such as America’s Health Insurance Plans, who claim that 20% to 50% of all advanced imaging techniques provide no tangible patient benefit.¹¹ *Choosing Wisely* is an initiative spearheaded by the ABIM Foundation that asks national medical organizations to identify 5 tests or procedures commonly used in their fields whose necessity should be questioned. As of January 2014, 46 organizations including the ACR and the Society of Nuclear Medicine and Molecular Imaging have joined in this effort. In total, 29% of the identified tests and procedures in the *Choosing Wisely* campaign are studies usually performed by radiologists; Table 3 shows the thoracic imaging tests identified as being overused.

Although drops in imaging utilization have already occurred from peak levels seen in the middle of the last decade, it remains incumbent on radiologists, as the domain experts, to play an active role in minimizing unnecessary and potentially harmful studies.¹² *Imaging 3.0* is a change process led by the ACR for the field of radiology as it transitions from a volume-based to value-based discipline. Essential to the success of this transformation will be radiologists’ acceptance of and leadership in the reprioritization of our professional activities that places a heavier weightage on noninterpretative services required for delivery of coordinated, efficient, and effective care. In the *Imaging 3.0* paradigm, these services will include more frequent consultations with referring physicians and patients on the front-end, to determine the appropriateness and optimal choice of imaging studies as well on the back-end, to enhance understanding of the significance of imaging results and implementation of actionable report recommendations.

The anticipated adoption of low-dose CT screening of lung cancer into standard clinical practice represents an ideal opportunity for radiologists to further shift from our specialty’s largely “invisible” role¹³ to one in which

TABLE 3. Thoracic Imaging Tests Believed to be Overused

Imaging Test	Sponsoring Organization
Chest radiography in children with uncomplicated asthma or bronchiolitis	SHM
Preoperative chest radiography in absence of clinical signs or symptoms	ACR, ACP, ACS
Chest CT for evaluation of indeterminate pulmonary nodules	ACCP, ATS
CT angiography for pulmonary embolism in patients with low clinical probability and negative D-dimer	ACP, ACCP, ACR, ATS
CT angiography for pulmonary embolism in young women with normal chest radiograph; consider radionuclide lung study	SNM
CT screening for lung cancer among low-risk patients	ACCP, ATS

ACCP indicates American College of Chest Physicians; ACP, American College of Physicians; ACR, American College of Radiology; ACS, American College of Surgeons; ATS, American Thoracic Society; SHM, Society of Hospital Medicine; SNM, Society of Nuclear Medicine and Molecular Imaging.

radiologist-to-patient communication is routine. The Mammography Quality Standards Act currently requires that a written summary of screening results be sent to each patient; it is likely that a similar communication standard will be applied to lung cancer screening to ensure timely and reliable receipt of results. As an adjunct to written communication, radiologists should also make themselves available for consultations with patients to discuss significance of findings, recommend imaging follow-up, and guide further investigation and subspecialty referral, as appropriate. For patients, this opportunity to interact with the experts who interpret their imaging studies is appreciated and would reinforce and render “visible” the professional identities of radiologists as highly trained and subspecialized physicians.^{14,15}

CONCLUSIONS

Professionalism requires that radiologists dedicate themselves to serving in the best interest of their patients. Applied at the societal level, this principle obligates radiologists as stewards of expensive and high-tech diagnostic equipment to play an active role in minimizing performance of unnecessary studies. In the current medical environment

of continuous change, maintenance of professionalism is an adaptive challenge that will require successful radiologists to be flexible and engaged in continuous learning and self-improvement.

REFERENCES

1. Tsou AY, Creutzfeldt CJ, Gordon JM. The good doctor: professionalism in the 21st century. *Handb Clin Neurol*. 2013;118:119–132.
2. Lucey C, Souba W. Perspective: the problem with the problem of professionalism. *Acad Med*. 2010;85:1018–1024.
3. ABIM Foundation. American Board of Internal Medicine, ACP-ASIM Foundation. American College of Physicians-American Society of Internal Medicine, European Federation of Internal Medicine. Medical professionalism in the new millennium: a physician charter. *Ann Intern Med*. 2002;136:243–246.
4. Cassel CK, Hood V, Bauer W. A physician charter: the 10th anniversary. *Ann Intern Med*. 2012;157:290–291.
5. American College of Radiology. 2013-2014 Bylaws. Available at: <http://www.acr.org/~media/ACR/Documents/PDF/MemberShip/Governance/2013%20Code%20of%20Ethics.pdf>. Accessed December 2013.
6. Donnelly LF, Strife JL. Establishing a program to promote professionalism and effective communication in radiology. *Radiology*. 2006;238:773–779.
7. Antiel RM, Kinghorn WA, Reed DA, et al. Professionalism: etiquette or habitus? *Mayo Clin Proc*. 2013;88:651–652.
8. Mueller PS. Incorporating professionalism into medical education: the Mayo Clinic experience. *Keio J Med*. 2009;58:133–143.
9. Armstrong JD II. Morality, ethics, and radiologists' responsibilities. *Am J Roentgenol*. 1999;173:279–284.
10. Kohn L, Corrigan J, Donaldson M. *To Err Is Human: Building a Safer Health System*. Washington, DC: National Academy Press; 1999.
11. Rao VM, Levin DC. The overuse of diagnostic imaging and the Choosing Wisely initiative. *Ann Intern Med*. 2012;157:574–576.
12. Levin DC, Rao VM, Parker L, et al. The sharp reductions in medicare payments for noninvasive diagnostic imaging in recent years: will they satisfy the federal policymakers? *J Am Coll Radiol*. 2012;9:643–647.
13. Glazer GM, Ruiz-Wibbelsmann JA. The invisible radiologist. *Radiology*. 2011;258:18–22.
14. Kuhlman M, Meyer M, Krupinski EA. Direct reporting of results to patients: the future of Radiology? *Acad Radiol*. 2012;19:646–650.
15. Qayyum A, Yu J-PJ, Kansagra AP, et al. Academic radiology in the new health care delivery environment. *Acad Radiol*. 2013;20:1511–1520.

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