Designing a Curriculum for Professionalism and Ethics Within Radiology:
Identifying Challenges and Expectations

Aine Marie Kelly, MD, MS, Patricia B. Mullan, PhD

Although professionalism and ethics represent required competencies, they are more challenging than other competencies to design a curriculum for and teach. Reasons include variability in agreed definitions of professionalism within medicine and radiology. This competency is also framed differently whether as roles, duties, actions, skills, behavior, beliefs, and attitudes.

Standardizing a curriculum in professionalism is difficult because each learner's (medical student/resident) professional experiences and interactions will be unique. Professionalism is intertwined throughout all (sub) specialties and areas and its teaching cannot occur in isolation as a standalone curriculum. In the past, professionalism was not emphasized enough or at all, with global (or no) assessments, with the potential effect of trainees not valuing it.

Although we can teach it formally in the classroom and informally in small groups, much of professionalism is witnessed and learned as "hidden curricula". The formal, informal, and hidden curricula often contradict each other creating confusion, disillusion, and cynicism in trainees.

The corporatization of medicine pressurizes us to increase efficiency (throughput) with less focus on aspects of professionalism that add value, creating a disjoint between what we do in practice and preach to trainees. Progressively, expectations for our curriculum include providing evidence for the impacts of our efforts on patient outcomes.

Generational differences in the perception of professionalism and the increasingly diverse and multicultural society in which we live affects our interpretation of professionalism, which can add to confusion and misunderstanding.

The objectives of this article are to outline challenges facing curriculum design in professionalism and to make suggestions to help educators avoid or overcome them.

Key Words: Education; implicit bias; professionalism; radiology; residents.

BACKGROUND

As a profession, medicine holds "the responsibility to prepare the next generation of physicians to serve the public" (1). Defining professionalism in ways that promote it as a competence to be taught and assessed is a challenge since professionalism means different things to different people, and changes with context and setting (2).

Professionalism can be framed under a legal and regulatory model; a commercial model, or a social contract model (3).

Medical professionalism tends to be framed within the societal contract, whereby the medical professional is granted freedom to practice—in return for looking after societies concerns. This definition emphasizes its relevance to the practice of medicine and makes the professions obligations and the reasons for their existence more understandable (4). Radiology educators can use similar frameworks starting with the foundational teaching of clinical competence, communication skills and ethical issues and legal understanding, and build upon this with components of excellence, humanism, accountability, and altruism (5,6).

Other professionalism frameworks that have been used in medical education include virtues, behaviors, or identity (7). The virtue-based framework sees the good physician as a person of character and focuses on the development of moral character and reasoning, plus humanistic qualities of caring and compassion. The behaviors framework emphasizes milestones, competencies, and measurement of observable behaviors with a good physician consistently demonstrating competence in

performing patient care tasks. The identity formation framework focuses on physicians integrating into their identity a set of values and dispositions consonant with the physician community and aspiring to a professional identity reflected in the very best physicians.

Other definitions include personality characteristics or traits, or desirable qualities exhibited by workers doing their jobs or people's interpersonal skills that are perceived as being professional, as outlined in the physicians' charter (3). These include altruism, autonomy, competence, commitment, confidentiality, trustworthiness, integrity, honesty, morality, ethical behavior, responsibility to society, self-regulation, and teamwork.

Even though medical educators agree on the social contract definition of professionalism, it tends to be underemphasized in training. In past surveys of US and Canadian medical schools, although professionalism and ethics was taught in the majority, less than a third of the schools taught it in a dedicated course or integrated series of courses (5,8,9).

In medical schools and graduate medical education (radiology residency), professionalism is integrated within other rotations and less explicitly taught, with learning more entrenched in the "hidden" or informal curriculum. Assessment of professionalism is often based on attendance or class participation only or graded on a pass-fail basis (8,10). As a result of these factors, there may be a tendency for trainees/residents to see such competencies as being less important than the mainstream subjects such as patient care and medical knowledge.

Many medical schools perceived the need to offer explicit activities intended to inculcate in students the values, attitudes, and behaviors that characterize medical professionalism (5). By formalizing of assessment of professionalism and making it count towards graduation from residency programs will help place it in context alongside the other core competencies, milestones, and activities (11).

In an informal survey (by one of the authors at a recent Association of University Radiologists meeting of program directors in radiologists), nine out of ten did not have a formal curriculum for teaching of professionalism to radiology residents. A few programs had faculty talk to the residents once or twice annually on the subject, with the emphasis focused on research ethics. The new American Board of Radiology exam of the future core and certifying exams now place more of an emphasis on "non-interpretative skills" with about a quarter to a third of the examined content pertaining explicitly to areas falling under the realm of professionalism, including communication, patient safety, quality, interpersonal skills, ethics, compliance, and regulations (12).

Despite these challenges, accrediting agencies progressively look for our graduate programs to build their training and assessment on research on predictable professionalism challenges and assessment practices. For example, current research can inform our development of curriculum on teaching about implicit bias and assessment practices pertinent in ameliorating known constraints on hearing and acting on peer and faculty feedback about implicit bias (13).

In the rest of this article, external forces and challenges that educators face when teaching professionalism to residents will be evaluated, including the difficulty framing a curriculum, the influence of the hidden curriculum, the pressures of corporate medicine, and the cultural influences on our interpretation of medical professionalism. Useful suggestions are made for what and how to teach professionalism to radiology residents.

FRAMING AND STANDARDIZING A CURRICULUM IN PROFESSIONALISM

Compared to the other competencies of patient care and medical knowledge, with the focus on imaging modalities or an organ or system, the principles of professionalism are completely integrated and inseparable from all the radiological subspecialties and imaging modalities. Recent changes in accreditation requirements for all graduate medical education programs progressively require evidence of our training programs' efforts to teach and assess explicit professionalism milestones (1).

There are many conceptual frameworks or theories surrounding professionalism and ethics and it is very difficult to get trainees, educators, and administrators to agree upon which might be suitable to use in medical (and radiology) education.

Even if one could agree on an appropriate conceptual framework or frameworks, it is impossible to standardize the curriculum (or assessment) as every learner is unique as is every teacher. Another disadvantage of limiting oneself to an established theory or theories to underlie the teaching of professionalism and ethics is the potential to ignore or exclude significant issues that may affect a patient/trainee or group, in a specific scenario and time.

A good place to start as an introduction for new radiology trainees might be to look at historical events that have shaped views of medical (and radiology) professionalism down through the years. These events and transgressions can be used to illustrate aspects such as patient protection, professional competence, confidentiality, honesty, access to and quality of care, just distribution of resources, and maintaining patient trust (14). These themes can run throughout the 4 years of radiology residency as a longitudinal thread.

Several of the radiology national (subspecialty) societies have adopted or drawn up their own codes of ethics or conduct, and this is something that radiology departments and residency programs could decide upon and devise themselves. There are also multisociety and organization endeavors such as the Choose Wisely, Image Wisely, and Image Gently Initiatives that encourage the radiology community as well as healthcare in general to take steps to optimize testing and imaging and to reduce radiation exposure in children and others undergoing imaging (15–17).

Professionalism can be taught in different frameworks based on virtues, behaviors/roles, and identity formation (7). For