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SPECIAL ARTICLE

Teaching and Assessing Professionalism in Ophthalmology Residency Training Programs

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Abstract. The Accreditation Council for Graduate Medical Education (ACGME) has mandated that all residency training programs teach and assess new competencies including professionalism. This article reviews the literature on medical professionalism, describes good practices gleaned from published works, and proposes an implementation matrix of specific tools for teaching and assessing professionalism in ophthalmology residency. Professionalism requirements have been defined by the ACGME, subspecialty organizations, and other certifying and credentialing organizations. Teaching, role modeling, and assessing the competency of professionalism are important tasks in managing the ACGME mandate. Future work should focus on the field testing of tools for validity, reliability, feasibility, and cost-effectiveness. (**Surv Ophthalmol 52**:300–314, 2007. © 2007 Elsevier Inc. All rights reserved.)

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The Accreditation Council for Graduate Medical Education (ACGME) has mandated that all residency programs "teach and assess" six general competencies. One of these competencies is *professionalism* (ACGME Outcome project. Available from www.acgme.org/outcome/comp/compFull.asp [accessed on 13 February 2006]).[59] The concept of professionalism in medicine is an ancient and revered one and we can all perhaps recall professing the "Hippocratic oath" (or some version of the oath) at our own medical school graduation ceremonies. These professional values have as much importance and relevance in the modern era as they did for Hippocrates 2,500 years ago. In fact, it is by design that the competency of professionalism was incorporated directly and prominently into the original ACGME mandate. Lynch et al in 2002 previously reviewed the assessment of professionalism.[9] In this article we review the literature on medical professionalism, update and apply the results from the Lynch review for residency training in ophthalmology, glean "good practices" from published works, and propose an implementation matrix, including specific tools for teaching and assessing professionalism in ophthalmology residency.

Methods

A PubMed literature search (limited to "English language" from 1966 to 2005) was performed using the search terms: *professionalism* and *assessment.* Titles were reviewed for topicality by a content expert (AGL) and selected abstracts were then reviewed in more detail. Individual full papers were obtained in

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order to glean specific "good practices" from the literature and to make recommendations regarding tools for teaching and assessing medical professionalism in ophthalmology residency training. Additional abstracts and presentations were obtained from Web sites on resident education, including the ACGME site.

Lynch et al had previously reviewed the literature on assessing professionalism.[59] These authors searched five electronic databases from 1982–2002 using Medline, the Educational Resources Information Center (ERIC), Topics in Medical Education Literature (TIMELIT), Health and Psychosocial Instruments (HAPI), and PsychINFO. In the search by Lynch et al, 28 search items were included: *professionalism, duty, ethics*, and variations of these terms or in combination with *assessment, evaluation*, and *measurement*. The reference lists of the retained articles and the literature reviews were also manually searched by Lynch et al.[59] The content expert (AGL) used the following criteria for selecting and including full articles in this review: topicality to ophthalmic resident education, inclusion of assessment of professionalism, and empiric evidence of use and preferably outcome. Letters to editor, case reports, opinion pieces, editorials, abstracts, and descriptive reports without outcome data were only included if they added significant new or important information. Papers related to teaching or assessing professionalism in medical students, nurses, or paraprofessionals were included only if they were directly applicable to resident assessment.

Results

The literature search methodology generated 162 titles. Limiting the search to English language yielded 152 articles. The content expert (AGL) reviewed the articles as noted above and selected 113 final references (including several Web sites and articles from prior published reviews) for inclusion in this article (ABIM Project Professionalism, available at www.abimfoundation.org/mpp2003/biblio_prof.htm).[1–113] Using the literature review, we define professionalism, describe means to teach and assess professionalism, and provide examples that might be applicable to ophthalmology residency training.

What is Professionalism?

Many authors[4,21–25,63,96–98] have attempted to define professionalism in medicine but it is unlikely that any one definition is suitable for every circumstance (ACGME. Advancing education in medical professionalism, available at www.acgme.org/outcome/implement/impHome.asp [accessed on 14 December 2005]). Van de Camp et al reviewed the literature and proposed a multidimensional construct including interpersonal (e.g., altruism, respect, integrity), public (e.g., accountability, self–regulation, justice), and intrapersonal (e.g., lifelong learning, maturity, morality, humility) professionalism.[104] The ACGME defines professionalism "as manifested through a commitment to carrying out professional responsibilities, adherence to ethical principles, and sensitivity to a diverse patient population." The ACGME definition of professionalism is intended to be broad and inclusive, which has both advantages and disadvantages. We include different definitions from various authors in order to allow the reader some flexibility in their own interpretation of the ACGME mandate for this specific competency. Table 1 contains the subcompetencies that compose the ACGME concept of professionalism (ACGME Outcome project. Available from www.acgme.org/outcome/comp/compFull.asp [accessed on 13 February 2006]). Table 2 includes a more representative list of selected attributes that might compose professionalism.[63]

Some medical specialties and professional societies (e.g., anesthesiology, internal medicine, obstetrics and gynecology, orthopedics) have defined even more subsets of behavior that compose professionalism within their specific subspecialty area. The American Board of Internal Medicine (ABIM) "Charter on Professionalism" was one of the first national initiatives to bring attention to the issue. The ABIM Charter has received extensive medical (e.g., *Annals of Internal Medicine* and *The Lancet*) and lay press exposure (e.g., 250 US and international newspapers and newsletter citations, 70 radio, television, and online interviews, and >60,000 reprint requests) (ABIM Charter. Available from www.abimfoundation.org/mpp2003/charter_prof.htm).[1,90] In addition to the humanistic and personal development aspects of

TABLE 1

ACGME Professionalism Subcompetencies

Residents are expected to:
a. Demonstrate respect, compassion, and integrity; a responsiveness to the needs of patients and society that supersedes self-interest, accountability to patients, society, and the profession.
b. Demonstrate a commitment to ethical principles pertaining to provision or withholding of clinical care, confidentiality of patient information, informed consent, and business practices.
c. Demonstrate sensitivity and responsiveness to patients'; culture, age, gender and disabilities.

Table derived from information at www.acgme.org/outcome/project/proHome.asp.

TABLE 2

Professionalism and the Three Social Values

I. Respect for the well-being and dignity of every individual
- A. First "do no harm"
- B. Reduce human pain and suffering
- C. Preserve and promote human life and function
- D. Seek knowledge and understanding of self and others
- E. Observe ethical reasoning in self and others

II. Commitment to civil society and community engagement
- A. Tell the truth
- B. Promote justice
- C. Protect human rights and strengthen social bonds
- D. Care for those in need
- E. Promote individual and collective accountability for the well-being of all

III. Dedication to the obligations of the professions in society
- A. Master knowledge and skills essential to the responsible practice of medicine
- B. Strive continuously for competence and expertise
- C. Cultivate collegial professional and interpersonal relations
- D. Promote research and advances in medicine and public health
- E. Strengthen the profession of medicine

Table modified from O'Donnell.[63]

professionalism, Kearney et al reported "meta-competencies" among anesthesiologists in professionalism, including vigilance, responsiveness, team worker, advocacy, flexibility, decisiveness, manner, confidence, communicativeness, expert pattern recognition, resourcefulness, assertiveness, conflict resolution, fluency, management skills, and leadership.[55] Obstetrics and gynecology program directors rated "honesty, accountability, respect, integrity, and excellence" as important[41] whereas orthopedic surgeons rated "respect/relationships, altruism, accountability/reliability, integrity and excellence" as important.[80] Table 3 includes some specific real world examples of professionalism.[97] To our knowledge, there is no ophthalmology-specific definition for professionalism in the literature. It is likely that our specialty will be able to define professionalism for ophthalmology using the existing definitions set forth by our colleagues in other medical specialties.

Why is Professionalism Important to Academic Medicine?

"Professionalism is the basis of medicine's contract with society."[90] We believe that the competency of professionalism is a dynamic one that occurs during each and every patient encounter. We also believe that clinicians, including academic attending physicians as well as residents and fellows, probably drift in and out of full compliance with all of the elements of professional competency. This drift may occur due to external factors that impact professional performance (e.g., time of day, clinic census or time pressures, hunger, anger, illness, psychosocial stressors, or other environmental factors). Although many of our colleagues believe that doctors are either professional or are not professional, we do not believe that it is an all or none concept. For example, at 5:00 PM on a holiday weekend after a busy patient clinic day one clinician may or may not spend as much professional time with a patient as on a Monday at 8:00 AM of a light clinic day. In addition, there clearly is a hidden curriculum from which good and bad professional behaviors are role modeled for our learners. One example is when a patient is presented at grand rounds and implicitly or explicitly the care of the outside hospital or the outside doctor is called into question or even ridiculed. This would not be considered professional behavior to an outside observer. Likewise, many of the behaviors and medical derogatory slang used in the clinics and on the wards to describe patients (e.g., "gomers, old vet, squirrel, dirtbag") might also be considered to be unprofessional behavior.

There are increasing threats to professionalism in the modern medical era, including generational-based attitude differences among physicians and physicians-in-training, increasing patient loads with declining reimbursements, the malpractice and litigation crisis, evolving and expensive biotechnology and information technology, the corporate transformation and commercialization of the health care market place, potentially conflicting financial relationships with industry, and the politics and economics of managed care.[64]

Although some in academic medicine might question the need for teaching and assessing professionalism, there is evidence that unprofessional behavior (often unrecognized or inadvertent) occurs commonly on an individual and institutional basis. Feudtner et al reported that 98% of medical students at six medical schools reported hearing physicians speak in a derogatory manner about patients and 61% reported seeing examples of unethical behavior by team members.[38] Residents in one survey reported (n = 571) seeing unprofessional behavior, such as "falsification of patient records"; "others taking credit for their work" (almost 50%); "mistreatment of patients or colleagues working while impaired" (75%); and "being required to do something they considered immoral, unethical, or otherwise personally unacceptable" (25%).[8] The lack of professionalism as a medical student or resident can be predictive of future

TABLE 3

Listing of Some Examples of Professionalism

Recognize the primacy of patient welfare ("first do no harm")
Respect patient dignity, autonomy, and confidentiality
Treat patients, staff members, faculty members, and trainees with respect and politeness
Practice social justice (e.g., just distribution of finite resources)
Employ complete, accurate, and compassionate communication and interpersonal skills
Use empathy and compassion for patient as a whole
Be sensitive to patient's culture, language, age, gender and disability
Maintain honesty, trust, and integrity in all physician relationships (e.g., avoid, manage, or disclose appropriately any real or potential conflicts of interest)
Practice altruism and subordination of self-interests in favor of others*
Commit to the values of public service, scientific knowledge, excellence in clinical care, and life-long learning
Be accountable and accept responsibility for actions or inactions
Comply with health "citizenship" and professional organization obligations (e.g., Federal and stage regulatory agencies or laws, local health regulations, state licensing board requirements, hospital, institutional, or departmental policies and procedures)
Demonstrate work ethic, be reliable, responsible, and dependable, and a team player
Recognize and respects limits and boundaries (e.g., asks for help when needed)
Meet relationship-centered expectations required to practice medicine competently (e.g., patient-physician relationship; community-physician relationship; health care system-physician relationship; physician-physician relationship; self-physician relationship)

Table derived from Swick and colleagues.[96,97]

*Author's note: Obviously there are limits to the practice of altruism. This component of professionalism has to be balanced against the equally important professional responsibility to one's own psychological and physical health. This would include stress reduction, time management, keeping fit, and making time for one's self and family. In one sense, this is also a form of "role modeling" for one's residents and patients (e.g., eating right, exercising, reducing stress, and maintaining balance for healthy living).

professional state medical board disciplinary action. Papadakis et al performed a case-control study of 68 cases of Medical Board of California disciplinary action (1990–2000) against University of California–San Francisco Medical School graduates. Of these actions, 95% were for deficiencies in professionalism rather than clinical incompetence. Logistic regression analysis showed that disciplined physicians were more likely to have had prior disciplinary problems in medical school ($P = 0.02$).[65] Teherani et al reported in a retrospective case-control study that there were three domains of unprofessional behavior related to future disciplinary outcome by a state medical board: 1) poor reliability and responsibility, 2) lack of self-improvement and adaptability, and 3) poor initiative and motivation.[103] Conversely Rowley et al reported that residents who had higher levels of professionalism were also more likely to be deemed clinically competent.[79] Finally, medical students and residents themselves in surveys have indicated their need for more ethics and professionalism teaching.[74]

Dealing with the Problem Resident

One important consequence of teaching and assessing professionalism will be a paradigm shift from simply remediating or dismissing the problem resident to preventing and managing the resident with problems. It has been our experience that most problem residents are problematic not because of lack of intellect but because of lack of professionalism. In the traditional model, only extreme outliers in professional behavior could be identified. For these individuals, attempts at remediation would follow, but often once the disciplinary path was started either the end result was suspension, probation, and dismissal, or the situation was recognized too late in the training process to allow due process and the problem resident was simply graduated despite marginal evaluations. Fear of litigation often was a powerful (real or perceived) barrier to formal dismissal from a program. Poor documentation of progress or failure in remediation efforts is likely a contributing factor to the lack of enthusiasm or motivation for pursuing formal dismissal of a problem resident.

We believe that a formalized professionalism curriculum that outlines explicit expectations for professional behavior and is distributed at the onset of the residency is a crucial first step. Multiple formal assessments and samples of professional behavior should occur early in training and should continue in a routine, scheduled, and standardized manner throughout the residency. Identifiable behavior-specific deficiencies should be addressed, remediated, and documented with valid and reliable tools, using multiple tools and multiple observers.

Non-resident-related factors that produce unprofessional behavior should be addressed (e.g., an unsupportive or hostile learning environment, negative role models, or an institutional culture or hidden curriculum that de-professionalizes young physicians). For example, Shanafelt et al reviewed resident burnout using the Maslach Burnout Inventory (MBI) based on depersonalization, emotional exhaustion, or decreased personal accomplishment. Of the 115 participating internal medicine residents, an astounding 76% met MBI criteria for burnout and 53% reported suboptimal patient care practices (e.g., poor professional attitudes or unethical behavior). Predisposing factors in the work environment or institutional culture may contribute to unprofessional behavior later in the problem resident. Early recognition of these environmental factors might allow programmatic improvements that would benefit all residents.[82] Daugherty et al reported that 93% of 1,277 residents reported mistreatment during training by attending (81%), senior residents (77%), patients (63%), or nurses (62%). Unprofessional behaviors that were identified included mistreatment of patients (40%) and falsification of medical records (45%).[26] Cynical, hypercritical, or demeaning comments about the medical field by attending physicians (e.g., regarding decreased autonomy, government regulations, financial pressures, medical liability, academic pressures for research and productivity) are also contributing factors to the erosion of resident physician satisfaction and probably impacts professional behavior of residents. It is easy to understand how this informal or hidden curriculum may run counter to the formal concepts taught to residents on professionalism in the structured curriculum (i.e., "Do as we say, not as we do.").[60,112]

What is not Professional?

Although it may be difficult to define professionalism, we all seem to agree with the famous 1964 Justice Potter Stewart's definition of "obscene" (i.e., "I know it when I see it") as a field definition for unprofessional behavior. The ABIM identifies seven general areas for lack of professionalism: abuse of power, arrogance, greed, misrepresentation, impairment, lack of conscientiousness, and conflict of interest. Duff gave some specific examples of unprofessional conduct in academic medicine (Table 4).[30] Critical or sentinel event markers based upon these types of unprofessional conduct should be included in the learner's record. Appendix 1 lists some samples of professional conduct that were developed for anesthesiology.

How to Teach and Assess Professionalism

Although some would argue that ethical character and professionalism are personal and that personality traits cannot be taught per se, we believe that both professional and ethical behavior can be taught and assessed. Eckles et al reviewed the medical literature on ethics (1978–2004) and concluded that deficits existed in the areas of 1) theoretical work on the goals of medical ethics education; 2) empirical studies that attempt to examine outcomes; 3) studies examining teaching methods; and 4) studies evaluating the effectiveness of various teaching methods.[31] Despite these limitations, there has been significant work on teaching and assessing professionalism for residents and an emerging body of literature on new and innovative tools for the job.

When and How Should We Teach and Assess Professionalism

The process of teaching and assessing professionalism begins in medical school but continues throughout residency training and beyond. Hilton and Slotnick[51] suggested six domains of professionalism: ethical practice, reflection/self-awareness, responsibility for actions, teamwork, respect for patients, and social responsibility. They proposed that the term *phronesis* (Greek: "practical wisdom") captured the essence of the professionalism competency and that this characteristic was acquired only after a prolonged period of experience and reflection on experience occurring in concert with the professional's evolving knowledge and skills base. They termed the prior period of pre-professional development as *proto-professionalism* and they recommended stage-appropriate learning experiences. These authors suggest that medical educators should maximize opportunities for attainment of professionalism (e.g., positive role models, encouragement and support) and minimize inappropriate attrition (e.g., negative role models, unsupportive work conditions, and pressure of overwork).[51] It is likely that during this proto-professionalism stage, teaching professionalism can affect the learner the most. Modification and formation of attitudes, ethics, and professionalism is likely actively taking place outside of the formal curriculum in learners during this proto-professionalism stage. As mentioned previously, much of this learning occurs within this informal or hidden curriculum (e.g., role models, learning environment, institutional culture, policies and procedures). Obviously, the hidden curriculum may help or in some cases hinder (e.g., mixed messages) professional development. We

TABLE 4

Duffs "Top Ten" List of Unprofessional Conduct in Academic Medicine

1. Intellectual or personal dishonesty (e.g., falsifying clinical records or fabricating research results or laboratory values, failure to follow through on assignments, plagiarism, cheating on examinations).
2. Arrogance and disrespectfulness (e.g., inappropriate sense of entitlement, breaching confidentiality).
3. Prejudice (e.g., gender, ethnicity, age, or sexual orientation, threats or hate crimes).
4. Abrasive interactions with patients and co-workers (e.g., exaggerated sense of self-importance; no one else's time or schedule is as demanding or as important).
5. Lack of accountability (e.g., medical errors or administrative oversights; failure to demonstrate personal investment in patient's outcome).
6. Fiscal irresponsibility (e.g., ordering expensive and clinically unnecessary laboratory tests, accepting "kick-backs", or inequitably distributing benefits and income within a partnership, participating in a conflict of interest).
7. Lack of sustained commitment to self-learning.
8. Lack of due diligence (e.g., carelessness, laziness, inattention to detail, and failure to follow through on management plans).
9. Personal excess (e.g., stealing medications, illicit substance use during patient care or drug or alcohol abuse, high-stakes gambling leading to financial ruin, and reckless high-risk behavior).
10. Sexual misconduct (e.g., inappropriate sexual advances or relationships with patients, coworkers, and students).

Table derived from Duff.[30]

believe that residents can find guidance for professionalism through traditional and innovative teaching tools during this proto-professionalism period.

Many institutions already have a formal medical ethics curriculum in place. Modification and enhancement of these existing teaching tools is an important first step in the evaluation and teaching of professionalism. Siegler (Table 5) described the University of Chicago principles for teaching clinical medical ethics using the "Six C's"[85] (i.e., clinically based, cases [real], continuous, coordinated [integrated], clean [simple], and clinicians as instructors). Teaching professionalism likely will require the use of the six C's in order to be time and cost effective for busy clinicians. Surdyk reported that certain knowledge-based components of professionalism can be taught and assessed (e.g., ethical principles, advance directives, informed consent, and business ethics); whereas other components (e.g., altruism, respect, integrity) are less amenable to objective measurement.[94,95]

Siegler described three dimensions of medical ethics that we believe also apply to teaching professionalism: cognitive skills, behavioral skills, and character development.[85] It is unlikely, however, that lectures alone will be able to teach and assess professionalism in the new ACGME competency model. Sulmasy et al reported the results of a randomized trial to assess the impact of an ethics curriculum on the knowledge and confidence of university hospital residents. Of the 85 participants, 25% received a lecture series (i.e., limited intervention [LI]), 25% received lectures and case conferences with an ethicist in attendance (i.e., extensive intervention [EI]), and 50% were controls. Post-test knowledge scores did not differ among the groups but confidence was significantly greater in the intervention groups compared to control group.[93] Based upon our review of the literature we propose that new teaching and assessment tools will be required to assess professionalism in residents.

TABLE 5

The University of Chicago "Six C's" in Teaching Clinical Ethics

1. Clinically based
2. Cases (real)
3. Continuous
4. Coordinated (integrated)
5. Clean (simple)
6. Clinicians as instructors

Table derived from Siegler.[85]

How to Assess Professionalism

The first step in any teaching and assessment process is to define the goals for learners and teachers. Specific, written and explicit expectations of professionalism should be defined in the curriculum and provided to the residents at the start of training. Clear definitions outlining the expectations for professional behavior, personal accountability, and the specific consequences for noncompliance should be included in the orientation program for residents. Trainees who fall below expectations should enter voluntarily into a step-wise and pre-defined intervention and remediation program. We believe that continuous behavior-specific formative feedback can change professional attitudes and beliefs, reasoning, and behavior. Table 6 lists specific examples for teaching and assessing professionalism

TABLE 6

Methods for Teaching and Assessing Professionalism

1. Cognitive aspects of professionalism
   - Teaching
     - Independent learning (e.g., reading assignments, portfolio)
     - Interactive learning (e.g., seminars, small group discussions)
     - Traditional lecture
     - Annual retreat or symposium on professionalism
     - Journal club articles on professionalism
     - Morbidity and mortality conference on professionalism or incorporation of professionalism concepts into ongoing conferences
   - Assessment
     - Pre- and post-testing of knowledge
     - Self-reported confidence survey in specific areas
     - Standardized written or oral exams
     - Attendance records and portfolio documentation of discussion
     - Faculty led chart stimulated recall exercise
     - Resident self-reflection with chart audit
     - Resident portfolio

II. Professionalism in clinical context
   - Teaching
     - Role modeling
     - Faculty mentor
     - Formative feedback session
     - Chart stimulated recall
     - Grand rounds
     - Resident as teacher programs
   - Assessment
     - Simulated or standardized encounter with objective structured clinical exam (OSCE)[20, 71, 87, 105]
     - Faculty mentorship and role-modeling with self reflection on professionalism[7]
     - Chart review (e.g., review of clinical cases with a one-on-one faculty counseling session)
     - Chart audit (e.g., self-reported review, random or consecutive sample)
     - Innovative chart stimulated recall discussion formats (e.g., clinical reasoning in situations that involve clinical uncertainty, teamwork exercises, standardized vignettes like Barry Challenges to Professionalism Questionnaire)[9]
     - Role playing and review of simulated clinical cases or panel discussion

IV. Assessment of specific professionalism behaviors
   - Global evaluation form (e.g., Musick 360 degree evaluation from patients,[62] coworkers, peers, instructors, and self assessment)
     - Patient satisfaction surveys or questionnaires (e.g., Wake Forest Physician Trust Scale)[47]
     - Learner surveys of educational environment (American Board of Internal Medicine Scale to Measure Professional Attitudes and Behaviors in Medical Education)
     - Direct observation (real or simulated or standardized patient, videotaped or live encounter).
     - Structured professionalism checklist (e.g., punctuality, greeting, hand washing, politeness, demeanor, dress, personal hygiene, communication and interpersonal skills, empathy, compassion, altruism)
     - Critical incident techniques or sentinel event markers (e.g., documentation of specific patient or other complaints with follow up review of remediation over time)
     - Portfolio (e.g., self assessment tool and improvement project, prior patient or staff citations for excellence or deficiency in professionalism, videoportfolio, documented remediation based upon a learning plan, self-reflection diary)[7, 13, 44]
     - “Resident as teacher” programs[42]
     - Longitudinal tracking of residents for critical events in the future (e.g., State Board of Medicine disciplinary actions)[66, 67]

and Table 7 lists some of the attributes for professionalism that the emerging tools could assess. We provide these additional guidelines for assessing for evidence of professionalism. We suggest that the reader select from this list or similar lists in order to determine the most appropriate attributes for their individual programmatic needs.

Although the global evaluation form has been the mainstay of faculty evaluation of resident performance, there are significant disadvantages to using this tool in isolation for assessing professionalism. First, the global evaluation form is subject to grade inflation (i.e., scores of 7 across all domains on the 9 scale); the halo or horns effect (i.e., judging a resident as poor or excellent in all domains based upon performance in one domain); a restricted grading scale (i.e., all of the grades are between 6 to 9 on the 9 scale); inter-rater and intra-rater

TABLE 7

Evidence of Professional Commitment

To professional competency
To honesty with patients
To patient confidentiality
To maintaining appropriate relationships with patients
To improving quality of care
To improving access to care
To a just distribution of finite resources
To scientific knowledge
To maintaining trust by managing conflicts of interest
To professional responsibilities

Table derived from Sox.[90]

reliability problems (i.e., easy and hard graders) and lack of standardized norm-referenced criteria for the scoring rubric.

We recommend that a scoring rubric with specific and explicit behavior-driven narrative anchors be used in the global evaluation form to improve the reliability and validity of the scoring. Larkin has reported on specific categories of performance for professional attributes. These categories could be incorporated into a scoring rubric for the various global assessment tools (Table 8). The use of an explicit written scoring rubric with narrative anchors and criterion based descriptors might improve the reliability and validity of the assessment.

Lynch et al summarized existing assessments in four major areas:

1. Ethics (e.g., morality, ethical principles, honor codes, social norms, deception, abuse or mistreatment, cheating, disclosures, and sexual misconduct)
2. Personal characteristics (e.g., emotional intelligence, personal values, empathy, trustworthiness, cynicism, and dogmatism)
3. Comprehensive professionalism (i.e., assessments that addressed two or more components of professionalism)
4. Diversity (e.g., cultural issues, socioeconomic status, gender, age, or disability").[59]

Table 9 lists the assessments identified by Lynch et al. We provide the list in order to be inclusive but we encourage the reader to review the tools and select the best practices for their program needs. Veloski et al performed an update of the Lynch study as well as a review of studies on professionalism from 1982 to 2002 (n = 134 studies). Reliability was reported in only 62 studies. Content validity was reported in 86 studies, but only 34 studies had strong evidence for validity. Concurrent validity was seen in 43 studies, and predictive validity was present in only 16 of the studies.[106] Based upon our experience and review of the literature, we believe that the following five tools are good practices: 1) role modeling, 2) formal mentoring programs, 3) peer and patient components of a 360-degree global evaluation, 4) routine integration of professionalism into the curriculum including grand rounds and conferences, and 5) a portfolio-based self reflection project on professionalism achievement. We believe that portfolio might be a particularly powerful tool for assessing professionalism because it is learner-driven and learner-maintained, it encourages self-reflection and instills a sense of life-long commitment to the process, it provides a repository for evidence of excellence in professionalism (e.g., patient or staff, or faculty compliments, special awards or citations), and it can incorporate less tangible components of professionalism (e.g., self improvement, self reflection, and self study).

TABLE 8

Larkin's Classification of Professionalism

Ideal (e.g., consistently above and beyond the call of duty)
Expected (e.g., meets all expectations)
Unacceptable (e.g., single episode of unprofessional behavior)
Egregious (e.g., persistent, recurrent pattern of unprofessional behavior)

Arnold has proposed three general areas of assessment of professionalism: 1) measurement of professionalism when evaluating clinical performance, 2) measurement of professionalism as a comprehensive assessment, and 3) measure of specific elements of professionalism.[3] Based upon our literature review, we believe that teaching encounters can be divided into these same three categories as proposed by Arnold:

1. Teaching about comprehensive principles of professionalism (e.g. cognitive components).
2. Teaching during clinical performance (e.g., teaching at the bedside).
3. Teaching specific elements of professional behavior.

Teaching the cognitive components of professionalism includes traditional lectures, case-based learning (perhaps with an ethicist in attendance), special grand rounds, small group or seminar discussion, or an annual retreat to review professionalism. Assessments of the effectiveness for these didactic teaching tools might include lecture attendance records, portfolio documentation of discussion, faculty-led chart-stimulated recall exercises, or resident self-reflection projects with self- or externally assessed chart audit. There should also be time for independent learning (e.g., directed reading assign-

TABLE 9

Example of Tools for Assessing Professionalism in Four Major Content Areas

I. Ethics
Christie Ethical Decision making Questionnaire[19]
Defining Issues Test[39]
Professional Decisions Values Test[72]
Savulescu Ethics Competence Tool[81]
Siegler Assessment[86]
Sulmasy Questionnaire for House Officers[92]
Wenger Orthopaedic Surgeon's Knowledge of Medical Ethics Questionnaire[109]
The Ethics objective Structured Clinical Exam (OSCE)[87]
Moral Behavior Analysis (Sheehan TJ, Thai SE, Krause KC, et al: Improving physician skills in managing morally problematic cases. (Presented at the annual meeting of the American Educational Research Association, Washington DC, April 24, 1987)
Levitt Ethical Issues Questionnaire[57]
II. Personal characteristics
Trust in Physician Scale[2]
Humanism scale[49]
Wake Forest Physician Trust Scale[47]
Schwartz Values Scale[35]
Jefferson Scale of Physician Empathy[52]
Linn Humanistic attitudes[58]
Basic traits and non-cognitive professional behaviors[69]
III. Comprehensive professionalism
Nurse Evaluation of Medical Housestaff Form[18]
Amsterdam Attitudes and Communications Scale[27]
Humanism Scale[49]
Scale to Measure Professional Attitudes and Behaviors in Medical Eduction[3]
Rochester Peer Assessment form[36]
Rochester Communications Rating Scale[36]
American Academy of Pediatrics evaluation of professionalism list[56]
Educational Commission for Foreign Medical Graduates (ECFMG) clinical skills assessment (CSA) using standardized patients[105]
University of Michigan Department of Surgery Professionalism Assessment Instrument[42]
IV. Diversity
Cultural competence in Medicine Questionnaire[43]
Sociocultural Attitudes in Medicine Inventory[101]
Robins Health Beliefs Communication OSCE[75, 76]
Elam Diversity in Medical School Questionnaire[34]

Table derive from Lynch et al.[59] The full review is available at www.medicalteacher.rog/Lynch%20Table1a.pdf.

ments, textbooks, journals, handouts, audio-video, internet media) and provision of interactive learning environments (e.g., formal ethics and professionalism topics) within core curriculum (e.g., seminars, small group discussions). Assessments of independent learning could include pre- and post-testing of knowledge, and self-reported confidence in specific areas of professionalism. Standardized written or oral examinations of cognitive components of professionalism already exist for many specialties (e.g., in-service training examinations, qualifying examinations, specific focused testing of ethical or professionalism concepts). It may also be useful to modify existing teaching encounters to promote discussions on professionalism. For example, a journal club could be arranged with specific professionalism-related articles and focused discussion. Assessment of this journal club tool might include portfolio documentation of attendance and participation, self-reflection exercise on the impact of specific journal articles on self-confidence in specific domains of professionalism, or a portfolio project linked to one or more articles from the journal club. Likewise morbidity and mortality conference (e.g., giving bad news, dealing with medical error) could be a springboard for directed discussions on professional behaviors. Innovative teaching formats could also be employed (e.g., clinical reasoning in situations that involve clinical uncertainty, teamwork exercises, standardized vignettes, role playing, review of simulated clinical cases or panel discussion, or resident as teacher programs[48]).

Teaching professionalism in the clinical setting might include simulated or standardized encounters with an objective structured clinical examination (OSCE) or checklist that can provide valuable formative feedback to residents.[20,71,87,105] Faculty

mentorship and role-modeling in the clinical setting with periodic resident self reflection may be a powerful teaching tool for professionalism.[7] Residents (93% in one survey) reported that contact with positive role models was the most important method of learning professionalism. Not unexpectedly, however, contact with negative role models was an important learning encounter as well.[15] The assessment of professionalism during clinical performance could include chart reviews (e.g., review of clinical cases with a one-on-one faculty counseling session), periodic chart audit (e.g., self-reported review, random or consecutive samples of behavior, or checklist for critical or sentinel events), or a global evaluation form (e.g., Musick 360-degree evaluation from patients,[62] co-workers, peers, instructors, and self assessment). Peer (i.e., anonymous resident on resident) assessments may provide unique and particularly valuable insights into professionalism and specific behaviors that might not be observable by faculty or be measured otherwise.[5,6,40,84,89] Patient satisfaction surveys or questionnaires (Appendix 2: Wake Forest Physician Trust Scale)[47] and learner surveys of educational environment (American Board of Internal Medicine Scale to Measure Professional Attitudes and Behaviors in Medical Education) can also provide formative information about professionalism in the clinical environment. Direct observation (e.g., either a real or simulated or standardized patient, or alternatively a videotaped or live encounter) may be an essential element of professionalism assessment, and the use of a structured professionalism checklist (e.g., punctuality, greeting, hand washing, politeness, demeanor, dress, personal hygiene, communication and interpersonal skills, empathy, compassion, altruism) might improve some of the problems inherent in the global evaluation form. Critical incident or sentinel event markers (e.g., documentation of specific patient or other complaints with follow up review of remediation over time) can identify outliers in professional behavior. Wofford et al identified several categories of unprofessional behavior based on reviews of patient complaints at one institution, including disrespect (36%), disagreement about expectations of care (23%), inadequate information (20%), distrust (18%), perceived unavailability (15%), interdisciplinary miscommunication (4%), and misinformation (4%).They concluded that these seven complaint categories could be useful in developing curricula related to professionalism.[110] Longitudinal assessment programs of professionalism have been utilized in some medical schools.[66,67] Finally, a portfolio can serve as both a repository for self assessment, for prior patient or staff citations for excellence or deficiency in professionalism, and for a documented remediation based upon a learning plan and a self-reflection diary).[7,13,44]

Summary

Professionalism is an important and critical competency. Without professionalism first, proficiency in the other ACGME competencies (e.g., medical knowledge, patient care, communication skills, practice based learning, or systems based

TABLE 10

Recommendations for Teaching and Assessing Professionalism

Define expectations for behavior at the start of residency with a written explicit curriculum for professionalism.

Perform longitudinal, formal, performance-based, behavior specific assessment.

Teach and assess early in the residency training process.

Use assessment to improve the educational process as well as improve individuals.

Provide formative and summative feedback to the learners.

Reduce financial (e.g., debt), work environment (e.g., duty hours), hierarchical (e.g., “pimping” residents), and psychological stress to foster and promote a culture of resident professionalism.[60]

Conduct frequent assessments over time using multiple observes (e.g., global rating forms from patients, peers, faculty, and ancillary staff), different tools, and multiple observations in different settings to define reliability and validity. We recommend against over-reliance upon a single tool (e.g., global evaluation) and encourage larger sample sizes of recorded observations and numbers of observers to improve reliability and validity.

Provide feedback to learners in a timely manner and with sufficient opportunity for improvement.

Consider a formal faculty–resident or senior–junior resident role-modeling and mentoring program to create a mechanism for providing an informal learning environment (role modeling) for professionalism and a formal mechanism for one-to-one formative feedback. This will require that faculty be expected to uphold the same standards of professionalism as the residents who we are mentoring.

Document teaching and assessment encounters.

Encourage learner self-reflection, self-designed learning plan, and self-assessment or professional development over time, and promote life-long learning and commitment to professional self-improvement (e.g., managing conflict of interest, continuing medial education, avoiding physician impairment.

learning) is less meaningful. Professionalism is not an abstract concept. Much time and effort have been devoted to defining the concept, and new tools need to be developed that will both teach and assess professionalism.

We believe that increasing attention to teaching and assessing professionalism will reduce the numbers of problem residents and will provide structure, process, and outcome assessments for dealing the problem resident (Table 10). The ABIM has been a national leader in promoting professionalism in medicine, and smaller subspecialties like ophthalmology do not have to reinvent the wheel in this regard. Although the literature includes many articles on the assessment of professionalism that have both face validity and some evidence for reliability, more extensive validity studies are needed to show construct, concurrent, discriminative, and predictive validity. Feasibility studies (beyond use at a single institution) and cost effectiveness studies are likely going to be necessary in the future to ensure that professionalism is taught and learned effectively by future generations of ophthalmologists.

We recognize the limitations of our work. First, the ACGME professionalism competency is one of the broader and more inclusive and thus difficult competencies to characterize, teach, and assess. The implementation and tool development process for professionalism remains a work in progress. Hopefully, we can rely upon some of the evolving techniques from our colleagues in the larger specialties like internal medicine, pediatrics, family practice, or general surgery to assist the smaller specialties like ophthalmology. Second, it is our belief that although there are multiple tools in the tool box that we could deploy, we will likely in the beginning be relying upon four primary tools for teaching professionalism: 1) traditional didactic lectures supplemented by small group discussions, interactive formats, and multimedia techniques; 2) role modeling; 3) formal mentoring processes; and 4) awareness and refinement of the hidden curriculum to create a culture that values and recognizes professionalism. Third, we believe that the assessment process for professionalism will likely initially rely upon three primary assessment tools: 1) faculty, peer, patient, and staff 360-degree global evaluations using a criterion referenced scoring rubric for formative and summative feedback; 2) direct observation of real, standardized, or simulated professional encounters; and 3) portfolio-documented examples of professionalism within a self reflection project or as a defined learning plan. A portfolio is a learner-driven, and program director–verified, collection of the learner's demographic information, evaluations and scores, sentinel event markers (good and bad), attendance records, achievements and awards, and research or self-reflection projects.

Fourth, professionalism should be taught and assessed at all levels of the clinician's medical career including at the undergraduate and medical school level as well as the residency, fellow, and practicing physician levels. This alignment of the professionalism curricula over time is critical in our opinion for the long-term success of the ACGME outcomes project. It makes no sense to only teach and assess for the competencies only in residency. The goals of the ACGME project are to instill a commitment to lifelong learning and to ultimately produce improvements in patient and physician outcomes.

Fifth, the ACGME outcomes project is an unfunded mandate for ophthalmology programs. As such we believe that it will be imperative that we find teaching tools that are good (i.e., reliable, valid, fair, and generalizable); fast (i.e., ready to use off the shelf or preferably currently in existence with low faculty and learner time burden); and cheap (i.e., inexpensive to implement and maintain). The best tools may in fact be ones that teach and assess simultaneously. Implementation will require buy-in from all of the stakeholders, including the hospital and college administration, program chairs, program directors, and, of course, the learners themselves. In addition, the burden for compliance should not fall exclusively upon the shoulders of the program directors. Despite these limitations, we hope that our work will stimulate further discussion and debate about teaching and assessing professionalism in ophthalmology training programs.

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Appendix 1

Society of Anesthesiology (SEA) Task force for Professionalism Competency: Professionalism Behaviors Available at http://scahq.org/Core/Prof/Profbehaviors.htm.

I. Character and Ethics
- A. Empathy/Compassion/Altruism
  - Demonstrate appropriate affect to patient & family
  - Listen to patient & family and elicit concerns
  - Maximize patient comfort through all means not just drugs
  - Puts the patient's safety and interests first
  - Explain anesthetic risk at a level appropriate to patient & family
  - Subjugates self interest to that of patient and society
  - Establishes balance of personal and professional life
- B. Honesty & Integrity
  - Admits mistakes
  - Doesn't withhold, falsify, or omit essential information
  - Can say "I don't know or I am not sure", doesn't bluff
  - Doesn't lie, cheat, or plagiarize
  - Is ethical in dealing with patients and coworkers
  - Comment only on those topics within your area of expertise
  - Consults experts on topics beyond area of expertise
  - Avoids conflict of interest
- C. Respect
  - Acquire available patient data before meeting patient
  - Introduces self & team members (acknowledging level of training) to patient & family
  - Uses appropriate form of patient address
  - Recognizes patient autonomy
  - Facilitate patient's informed decision making
  - Uses terminology that the patient can understand
  - Understands & maintains privacy & confidentiality
  - Demonstrates sensitivity to cultural, gender, and religious differences
  - Gives constructive feedback
  - Is assertive when necessary but doesn't cross the line to aggression
  - Recognizes contributors made by others
  - Observes etiquette/is respectful regardless of perceived hierarchal differences
  - Exhibits a clean, neat, appropriate appearance

II. Citizenship
- A. Departmental milieu
  - Cleans up after self
  - Seeks conflict resolution
  - Follows departmental protocols
  - Meets departmental deadlines
  - Offers praise & constructive criticism rather than whining or bragging
  - Asks questions/challenge ideas without offending

(*continued*)

Appendix Continued

- B. Institutional Integration
  - Participates on committees
  - Represents department well within the institution
  - Represents institution fairly at conferences or off-site
  - Collaborates with other departments
  - Promotes colleagues accomplishments in public forums
  - Meets institutional deadlines (certification, licensure, immunization etc)
  - Maintains security of controlled substances
  - Report potentially hazardous or negligent procedures that they observe
- C. Community Obligations
  - Facilitates access to care
  - Participates in peer-review
  - Avoids exploitive financial relationships
  - Advocates for patient's rights and health care

III. Work Ethic
- Does not disappear when there is work to be done
- Avoid excessively long breaks
- Does not manipulate schedule (daily or call) for own benefit
- Follows protocol for time off requests (doesn't no-show/call-in "sick")

IV. Team Player
- Shares all aspects of work fairly with peers
- Volunteerism when someone else is not able to perform their duties
- Looks for work to do and does it (lends a hand)
- Treats all personnel with respect
- Offers skills as a consultant
- Follows the leadership
- Leads when indicated

V. Self-Regulation
- A. Self-Awareness
  - Appreciates own strengths
  - Understands own limitations
  - Recognizes own weakness
  - Assess physical & mental health
- B. Self-Improvement
  - Actively seeks feedback
  - Changes behavior/practice based on feed-back
  - Takes responsibility for own education
  - Attends lectures and other structured learning opportunities
  - Strives for excellence, maturity and independence
  - Seeks opportunities to share knowledge/educate others
  - Matures from team member to team leader
- C. Accountability/Dependability
  - Takes responsibility for own actions
  - Absence of finger-pointing or blame shifting
  - Collaborates with faculty supervisor to develop anesthetic plan
  - Implements anesthetic plan as discussed
  - Consults faculty about changes in plan or patient condition
  - Exhibits professional behavior at all times in all environments
  - Confronts unethical/unprofessional behavior by others with faculty support

D. Reliability and Responsibility
- Is punctual
- Is prepared: pre-op, OR, homework, didactic
- Completes post-op follow-up
- Completes case logs
- Answers pages
- Establishes continuity of care
- Avoids substance abuse

Appendix 2

Wake Forest Physician Trust Scale

Respondents reply to each one of the statements using one of five possible responses: strongly agree (+2), agree (+1), neutral (0), disagree (−1), or strongly disagree (−2). An overall trust score is based on the sum of the scores on each time.

Trust in one's primary care physician

1) Your doctor will do whatever it takes to get you all the care you need.
2) Sometimes you doctor cares more about what is convenient for him/her than about your medical needs.
3) Your doctor's medical skills are not as good as they could be.
4) Your doctor is extremely thorough and careful.
5) You completely trust your doctor's decisions about which medical treatments are best for you.
6) Your doctor is totally honest in telling you about all of the different options available for you condition.
7) Your doctor only thinks about what is best for you.
8) Sometimes your doctor does not pay full attention to what you are trying to tell him/her.
9) You have no worries about putting your life in your doctor's hands.
10) All in all, you have complete trust in you doctor.