

**ASSESSMENT OF MATRICULATING MEDICAL STUDENTS' KNOWLEDGE
AND ATTITUDES TOWARDS PROFESSIONALISM**

Instruments Used in Study

Table 1

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Medical Student Professionalism Study:

Professionalism in Medical Practice

The vignettes on following pages represent different aspects of professionalism in medical practice and are based on actual experiences. The situations the vignettes describe are realistic in that they do not necessarily have a clear-cut right or wrong answer.

For the first 6 vignettes, you are need to select the ONE best action you would take in the situation. For vignettes 7 to 15, you are asked to rank order the possible responses from (1) for the most professional to a (3,4,or 5 depending on the number of possible actions) for the least professional action.

Authors' note:

The vignettes in this instrument are adapted from the American Board of Internal Medicine Project Professionalism and are used with permission:

<http://www.abim.org/pdf/publications/professionalism.pdf>

For vignettes 1 to 6, please circle the ONE response that you believe would be most consistent with appropriate behaviors of professionalism in medicine.

1.

A patient of yours who is suffering from early Alzheimer's disease has experienced increasing difficulty in caring for herself at home, has experienced several falls, and has no one with her during waking hours. You wish to admit her to the hospital, but your request for admission is denied by her HMO. You strongly disagree with this decision, since you are concerned about the potential that the patient may suffer injury from a fall or may burn herself while fixing lunch.

Your best answer to this situation should be:

- A. Insist on speaking with the HMO's medical director to defend your medical opinion that admission is warranted.
- B. Provide an admitting diagnosis that you have failed to document but that would serve to qualify the patient for acute admission.
- C. Order a CT scan of the brain and a neurology consult to rule out treatable causes of dementia.
- D. Enlist the patient's family to file an appeal with the HMO.

2.

You are the principal investigator of a large, federally funded clinical trial in cardiology. You oversee a staff of research assistants, all recent college graduates, who manage the patient visits, medication and the data collected. Extensive data are collected daily from the clinic patients, creating an intense but exciting environment. One Wednesday afternoon, you ask a newly hired research assistant to develop a database by the end of the week so that you can analyze data regarding the patients' cholesterol levels for a paper you've been working on. You perform the analyses and find a result supporting your hypothesis with strong statistical significance. Subsequently, the paper is accepted for publication in a major, prestigious medical journal.

Seven months later, just before the paper is to appear in the journal, another research assistant notices a discrepancy between a datapoint from this database and the original raw data. Upon investigation, you find that about 15% of the numbers are incorrect. You confront the research assistant who created the database. He admits he felt very pressured to get the project done in time and thought that since the database was so large, making up a few numbers wouldn't affect the results. You quickly correct the data error, redo the statistical analysis, and find that the results continue to support the hypothesis, though the results are barely significant now.

What one option would you select?

- A. Terminate the research assistant even though his work has been superb, and he now knows the consequences of his poor judgment.
- B. Reprimand him and report the incident to personnel.
- C. Immediately notify the journal and retract the publication.
- D. Immediately notify the journal that there was a statistical error in the paper and provide the correction.
- E. Do not report the incident to anyone because the original hypothesis is still supported, although more modestly.

3.

You are having a busy day as a consultant and you're still at the hospital at 8:00 pm. You check in with your answering service, only to learn that a primary care physician has requested a consultation from you to "see his patient tonight."

What is the most appropriate course of action for you to take:

- A. Complain to the answering service that you are too busy and to leave you alone.
- B. Call the nursing floor and inform them that you are too busy to see the patient.
- C. Go see the patient and don't complain.
- D. Call the consulting physician to obtain more information about the patient and suggest that it would have been helpful for him to call you first to determine the case's level of urgency.
- E. Ask your answering service to call the referring physician and tell her that she will have to find someone else to see this patient.

4.

You are two weeks into the first clerkship of your senior year, a month in the Emergency Room. You are excited about the increased level of responsibility you have been given, especially since you plan to apply for a residency in surgery and hope that the attending physician will give you a good recommendation.

You are asked by the resident to do an incision and drainage (I&D) of a breast abscess in a 38 year old woman who is on welfare. You use a local anesthetic to numb the area, then proceed to the I&D. It soon becomes clear that the patient is quite uncomfortable (and so are you). But you continue with the procedure, telling the patient that it will be over soon. After the patient has been discharged from the ER, you realize that you had not anesthetized the area sufficiently and that she must have experienced a lot of pain during the procedure.

What should you do?

- A. Forget about it. It's all part of your learning, and patients who come to the ER of teaching hospitals can expect to be treated by students.
- B. Speak with the senior resident in the ER and tell him you are concerned about the pain your actions caused.
- C. Tell the attending physician what has happened, and hope that he will still be willing to write a good letter of recommendation.
- D. Contact the patient to apologize.

5.

A long-time patient of yours comes to the emergency room asking to see you. He lives in a remote area in substandard living conditions and with inadequate nutrition, but has long valued his independence. He has no family, no neighbors, and as a loner, avoids establishing friendships. His complaint is that he is cold. He is out of wood, cannot keep warm at night, and fears he will freeze to death. He asks for your help.

On examination, as always, he is unkempt, has poor personal hygiene, smells of tobacco and alcohol, and has one single small area of frostbite on his left great toe. He is not intoxicated. His physical examination is otherwise normal.

The single best solution to your patient's problem is to:

- A. Have social service see him for purposes of arranging placement in a group home.
- B. Arrange for admission to the alcohol detoxification unit.
- C. Arrange for psychiatric admission.
- D. Call the County Commissioner and arrange for the town to buy your patient fuel.

6.

You have had a very busy day seeing patients in your office and in the hospital. As you reach your car in the hospital parking lot, a physician you know only in passing approaches you and tells you with an angry tone in her voice that she resents your recent action as a member of the hospital's quality assurance committee. The committee had determined that a certain diagnostic procedure did not meet the standards of practice and thus would no longer be performed. The physician tells you that you have no right to tell her how to practice medicine and that she intends to continue doing the test (which is quite remunerative).

What would be the most appropriate course of action for you to take?

- A. Tell her to mind her own business and go home.
- B. Listen to what she has to say, then go home and forget about it.
- C. Tell her that she will have to speak with the committee chairman.
- D. Tell her that you will consider her comments, review the committee's minutes and possibly ask the committee to reconsider its actions at its next meeting.
- E. Suggest that her anger is inappropriate and tell her that you will no longer refer patients to her.

For vignettes 7 to 15, rank order the responses in order of 1 (one) for the most appropriate behavior to 3, 4, or 5 for the least appropriate behavior of professionalism in medicine

7.

You are an internist in a moderate-sized community hospital two hours away from a major teaching hospital. One of your long-term patients has benign prostatic hypertrophy and possible carcinoma of the prostate. Although you regard the urologist on staff as competent, he is not the specialist to whom you would go if you were in the same situation.

What should you do?

- A. Refer your patient to the local urologist on the premise that the management will be good enough.
- B. Offer your patient the option of seeing a urologist of national stature at the regional teaching hospital.
- C. Discuss your concerns with the local urologist and let him make the decision of whether to refer.
- D. Tell your patient that if it were you, you would go to someone other than the local urologist.

8.

Your daughter is scheduled to graduate from high school this afternoon. As you are completing your morning hospital rounds and are preparing to sign out to a colleague, one of your long-time patients enters the emergency room with severe substernal chest pain. The ER physician feels that the situation warrants a work-up to rule out an acute myocardial infarction.

You enter the ER and find that the on-call partner in your group practice has already arrived to evaluate the patient. Because you know him to be competent and conscientious, you have no compunction about proceeding ahead with your personal plans.

When you see the patient to reassure him that the problem will be handled well by someone in whom you have complete trust, your patient pleads with you to stay and see the matter through. "I will feel so much better if you are here," he tells you with evident apprehension.

What will you do?

- A. Stay with the patient and miss your daughter's graduation.
- B. Reassure the patient as fully as possible that your associate will do an excellent job and leave to attend the graduation ceremony.
- C. Leave for the high school, but call back at intervals and plan to return to the hospital if the patient is not doing well, even if it means missing the ceremony.

9.

You are a senior medical student with only six months to go before graduation. Over a couple of beers at a local bar, one of your classmates confides in you that he is HIV positive, with mild clinical symptoms. Currently, you are both on an advanced general surgery clerkship. He has several other clinical rotations left, including one in the Intensive Care Unit. The next morning, your classmate regrets telling you about his HIV status and asks you to say nothing about it to anyone. He promises to practice universal precautions during his remaining clinical rotations. After graduation, he plans to enter a radiology training program and feels that his contact with patients will therefore be minimal.

As the colleague with whom this confidence was shared, what should you do?

- A. Keep it confidential since he has promised to practice universal precautions.
- B. Keep it confidential since he is only six months away from graduation, has worked so hard and has a large student loan debt.
- C. Try to talk him into quitting medical school; if he fails to do so, tell him you will have no option but to report his HIV status to the Student Affairs Dean.
- D. Immediately notify the hospital's Infectious Disease Committee so that preventive care for the patients with whom your classmate has had contact can be started
- E. Immediately notify the attending surgeon who is in charge of your current clerkship.

10.

A 28-year-old woman whom you have met for the first time at a cocktail party begins to describe her medical history to you. During her last pregnancy three years ago, she had a single seizure just as labor began. Her primary physician has insisted that she continue on anticonvulsant medication, even though her physical and neurological exams have been completely normal. She tells you happily that she has just become pregnant again. As a neurologist, you are concerned that she may not need anticonvulsant medication. Further, the anticonvulsant medication she is taking may cause birth defects. She has not asked you for advice.

What should you do?

- A. Suggest that she stop her anticonvulsant medication, because she is pregnant.
- B. Suggest that she seek the advice of another physician.
- C. Assure her that she is in good hands.
- D. Make no comment about her medical care.
- E. Call her primary care physician the next day to tell him he is mismanaging his patient.

11.

Your physical diagnosis course is being taught by residents who are being supervised by a senior member of the faculty. During a session devoted to the examination of the chest, the male faculty member places his arm around the waist of a female resident and thanks her for the terrific job she did demonstrating the techniques of the physical exam. You sense that the resident is made uncomfortable by the gesture.

An appropriate response on your part would be:

- A. Do nothing, on the basis that the faculty member was simply showing his appreciation for a job well done.
- B. Report the incident to the dean as an example of sexual harassment.
- C. Tell the faculty member that you thought the gesture was inappropriate and that you were made uncomfortable by it.
- D. Ask the resident if the gesture made her uncomfortable.
- E. Ask the resident if there are actions she would like you to take on her behalf.

12.

A 35-year-old previously healthy man comes to the emergency room with chest pain. Physical examination and an electrocardiogram show evidence of myocardial ischemia. Because you know that myocardial ischemia in young adults is often associated with drug use, you order a urine toxicology screen which is positive for cocaine metabolites. The patient has an uneventful course in the hospital. Further discussion with the patient reveals that he is an elementary school bus driver. He emphatically denies the use of cocaine or any other recreational drugs.

What should you do?

- A. Inform him of the urine test result and recommend that he obtain drug counseling.
- B. Ask his permission to inform his employer.
- C. Inform his employer without his permission.
- D. Report him to the Bureau of Motor Vehicles.

13.

You are a junior medical student on your first medicine clerkship. One afternoon, one of the patients on the ward tells you that he is bisexual and that he is greatly disturbed by the fact that he is having unprotected sex with male partners while continuing his sexual relationship with his wife. His wife does not know about this. He has developed a sense of trust in you and wants your advice. But he asks you not to tell anyone else about his sexual habits, because he fears that disclosure will ruin his marriage and his career.

You should consider the following:

- A. Respect his wishes and tell no one.
- B. Inform your resident and your attending physician, because this information may be pertinent to the patient's care.
- C. Tell the patient that you value his trust in you, but that you feel an obligation also to his wife, who is in danger. Inform him that either he tells his wife, or you will.
- D. Tell the patient that this is a very complicated situation and you must seek an ethics consultation to help guide your choice of action.

14.

You have been asked to serve on the Board of Directors of the community hospital where you admit most of your patients. You have been quietly lobbying for this appointment for the past year because you believe there are changes that need to be made in the hospital management and operations. While you know it is an honor to be asked, it will require a lot of time and effort. Your family has been going through a difficult time with the recent diagnosis of Alzheimer's disease in your father-in-law.

What should you do?

- A. Accept the appointment to the board and direct your effort to being the best board member possible.
- B. Ask a colleague what would be the best way to avoid being over-committed.
- C. Talk with the chairman of the hospital board to explain your family situation and the possibility of needing to accept fewer board responsibilities.
- D. Decline the appointment and direct your efforts to helping your family cope with your father-in-law's illness.

15.

An investigator for the state Department of Health calls you about your patient with a slowly progressive untreatable cancer. You have been providing him with supportive care that includes control of his pain with narcotic analgesics. The investigator informs you that the patient has received narcotic analgesics from other physicians, and that he has served a prison term for theft related to drug addiction. The patient has never told you either about his prison term or about getting drugs from multiple physicians.

An appropriate response on your part would be:

- A. Do nothing; the patient needs the analgesics from several physicians to control his pain.
- B. Discuss the problem with the other physicians in order to reach an agreement that only one physician should prescribe medication to control his pain.
- C. Confront the patient and tell him to find another physician because he is no longer under your care.
- D. Discuss this information with the patient and assure him that his pain should be controlled, but management of the pain depends upon an accurate account of analgesic requirements. If his pain is uncontrolled, he needs to report this information to you.
- E. Report the incident to the police.

Medical Student Professionalism Study:

Test of Knowledge of Professionalism

Every beginning medical student has some familiarity with the concepts and attributes of professionalism in medicine. We want to study your knowledge of the principles and attributes of professionalism as you enter medical school and how your knowledge might change over time.

The multiple-choice questions address five of the nine attributes of professionalism. For each item, select the one best answer by circling your choice.

1. Being punctual and on-time for meetings and appointments is an element of which of the following attributes of professionalism?
 - A. Accountability.
 - B. Core humanistic values.
 - C. Commitment to excellence.
 - D. Subordinate self-interests.

2. Being caring and compassionate in our interaction with patients is a behavior of which of the following attributes of professionalism?
 - A. Core humanistic values.
 - B. Ethical and moral standards.
 - C. Subordinating self-interests.
 - D. Commitment to excellence.

3. Patient advocacy is one behavior of the following attribute of professionalism?
 - A. Subordinating self-interest.
 - B. Core humanistic values.
 - C. Ethical and moral standards.
 - D. Respond to societal needs

4. Self-reflection means to think about what was done wrong in order to avoid making the same mistake in the future.
 - A. True
 - B. False

5. Subordinating self-interest means that you
 - A. avoid all conflicts of interest.
 - B. accept feedback from peers without question.
 - C. resolve conflicts in the best interest of the patient.
 - D. are always caring and compassionate

6. Which of the following characteristics would be considered a humanistic value?
 - A. Beneficence
 - B. Punctuality
 - C. Altruism
 - D. Patience

7. Being on the watch for potential conflicts of interest is an element of which attribute of professionalism?
- A. Self-reflection.
 - B. Commitment to excellence.
 - C. Ethical and moral standards.
 - D. Subordinate self-interests
8. The principle of nonmaleficence means
- A. the opposite of beneficence.
 - B. to be fiscally responsible.
 - C. to prevent harm.
 - D. to be compassionate and caring.
9. The difference between altruism and subordinating self-interests is
- A. the notion of cost to the physician.
 - B. a measure of quality vs quantity.
 - C. the target of the behavior is a patient or an event.
 - D. only minor and really synonymous.
10. Effective clinical decision-making requires the ability to reason deductively in combination with which of the following skills?
- A. Self-reflection
 - B. Long-term memory recall.
 - C. Subordinating self-interests.
 - D. Accepting self-limitations.
11. The professionalism attribute of evincing core humanistic values is based on the understanding of
- A. human interaction.
 - B. cultural differences.
 - C. local customs and traditions.
 - D. personal beliefs.
12. One benefit of self-reflection is to insure a balance in one's professional and personal life.
- A. True
 - B. False

13. Confidentiality of patient information is associated with which of the following attributes of professionalism?

- A. Ethical and moral standards.
- B. Accountability.
- C. Commitment to excellence.
- D. Core humanistic values.

14. Too much self-reflection will only serve to undermine one's confidence in their decisions.

- A. True
- B. False

15. Reporting a honor code violation in medical school is different than reporting a fellow physician who comes to rounds after drinking too much at lunch.

- A. True
- B. False

16. Which one of the following behaviors are considered to be a core element of ethical and moral standards?

- A. Beneficence.
- B. Integrity.
- C. Punctuality.
- D. Trustworthiness.

17. Which of the following actions is NOT an example of accountability as a student or physician?

- A. Provide constructive feedback to peers.
- B. Address observed errors by fellow student.
- C. Participate constructively in small group sessions.
- D. Accept appropriate feedback from fellow students.

Medical Student Professionalism Study:

Questionnaire of Opinions and Attitudes

Every beginning medical student has some familiarity with the concepts and attributes of professionalism in medicine. We want to study your impressions of the principles and attributes of professionalism as you enter medical school and how those impressions might change over time.

The purpose of this questionnaire is to assess how you feel about these concepts and attributes. There are no right or wrong answers to any of these items; they only ask for your impressions and attitudes toward these attributes. Because there are no right or wrong answers, you should respond to the items as quickly as you can read them.

Use the following responses to describe the extent to which you agree or disagree with the statement:

- SA = Strongly Agree
- S = Agree
- N = Neither agree nor disagree
- D = Disagree
- SD = Strongly Disagree

1. I have a responsibility to help fellow students learn even if I have to sacrifice some of my own study time.	SA	A	N	D	SD
2. A physician should almost never doubt or second-guess their decisions.	SA	A	N	D	SD
3. To be an effective physician, one must first be humanistic.	SA	A	N	D	SD
4. The practice of medicine requires that the physician subordinates his or her personal needs to the needs of the patient	SA	A	N	D	SD
5. Adhering to high ethical standards is the first and most important attribute of professional medical practice.	SA	A	N	D	SD
6. Reporting the clinical errors of a fellow physician only undermines the public's confidence in the medical profession.	SA	A	N	D	SD
7. Effective medical practice must begin with exercising sound diagnostic and clinical reasoning skills.	SA	A	N	D	SD
8. In small rural towns, the patients' needs must be secondary to the long-term financial future of the health care system.	SA	A	N	D	SD
9. Self-reflection about one's clinical decisions is one of the most important ways to improve clinical skills.	SA	A	N	D	SD
10. Physicians are accountable not only for their patients but also for the health care system.	SA	A	N	D	SD
11. Being caring and compassionate to patients is something that is learned in medical school and refined during residency.	SA	A	N	D	SD

SA = Strongly Agree
 S = Agree
 N = Neither agree nor disagree
 D = Disagree
 SD = Strongly Disagree

12. Self-reflection is as important an attribute of professionalism as is maintaining high moral and ethical standards.	SA	A	N	D	SD
13. Your willingness to sacrifice your own personal happiness to the needs of your patients is paramount to the practice of medicine.	SA	A	N	D	SD
14. As a student, it is as important to adhere to high ethical and moral standards all the time, not just when working with patients.	SA	A	N	D	SD
15. Physicians must be accountable for their colleagues.	SA	A	N	D	SD
16. Showing respect for your colleagues and staff is as important as showing respect for your patients.	SA	A	N	D	SD
17. Upholding high moral and ethical standards in all aspects of your personal life is essential to the practice of medicine.	SA	A	N	D	SD
18. Maintaining a balance between one's personal and professional lives can only be accomplished by careful limiting clinical activities each day.	SA	A	N	D	SD
19. If the medical profession is to regain the trust of patients, it is essential that physicians exemplify humanism.	SA	A	N	D	SD
20. Ethical decisions must be made relative to the needs of the patient and the needs of the health care system	SA	A	N	D	SD
21. Your responsibility to address inappropriate actions of fellow students is limited primarily to patient care activities.	SA	A	N	D	SD

Medical Student Professionalism Study:

Questionnaire of Opinions and Impressions

Every new student beginning medical school has some familiarity with the concepts and attributes of professionalism in medicine. We want to study your impressions of the principles and attributes of professionalism as you enter medical school and how those impressions might change over time.

The purpose of this questionnaire is to assess how you feel about these concepts and attributes. There are no right or wrong answers to any of these items; they only ask for your impressions and what the terms mean to you. Because there are no right or wrong answers, you should respond to the items as quickly as you can read them.

