

Table 1b (short version): Example Professional Assessments

Name of Assessment	Description	No. of items/codes	Reliability of data/codes (see method for definitions)	Validity/ trustworthiness of data (see method for definitions)	Notes
Ethics-Attitudes/Beliefs					
1. Feudtner Personal Development and Ethical Environment Survey[14]	Assesses 1) whether students encountered ethically problematic situations, 2) their attitudes toward those situations, 3) their perceptions of their personal ethical development; self-administered questionnaire; multiple choice questionnaire (MCQ)	38	None reported	None reported	Purpose: Research Setting: 6 medical schools Participants: Medical students (3rd & 4th-yr.)
2. Novack Physicians' Attitudes toward Using Deception Questionnaire[27]	Assesses willingness to use deception; self-administered questionnaire; MCQ, 4 pt scale ("strongly agree" to "strongly disagree"), 4 pt scale ("never" to "often"), ranking, qualitative	19	None reported	Face	Purpose: Research Setting: Statewide Participants: Practicing physicians
Ethics-Knowledge					
3. Defining Issues Test (DIT) [9,115,123,129-132]	Assesses moral reasoning; self-administered questionnaire; 5 pt scale ("great importance" to "no importance"), 4 pt rank order ("most important" to "fourth most important")	102	None reported	Previously established; In 1992 study discriminated between ethics course participants and non-participants	Purpose: Education, research Setting: Medical schools, medical centers Participants: Medical students, residents, practicing physicians
4. Professional Decisions Values Test (PDV)[30,134]	Assesses ethical reasoning; self-administered questionnaire; MCQ	20	Inter-item (Cronbach's alpha): 0-0.23, Test-retest: 0.56-0.92	Content: Expert review Construct: Results consistent with theoretical precepts	Purpose: Research Setting: Medical school, law school Participants: Medical and law students (1st -yr.)

Ethics-Behaviors

5. Ethics OSCE[51,135,136]	Assesses ability to address ethical situations; trained rater observed student interact with SP; checklist ("done" or "not done")	8 to 10	Inter-rater: 0.44-0.8, Generalizability coefficient: 0.28	Face	Purpose: Education Setting: 5 medical schools Participants: Medical students (4th-yr.), foreign graduates Feasibility: Need 12 examiners/raters and 8 SPs (for 4 cases), training for each group
6. Smith Assessment of Moral Reasoning and Ethical Judgment[47]	Assesses ability to recognize and address ethical issues; data collected via rating by SP and self-administered questionnaire; 5 pt scale ("excellent" to "failing"), qualitative	5 items (one case)	Inter-rater (for qualitative only): 0.6-0.9 (Rho)	None reported	Purpose: Education Setting: Medical school Participants: Medical students (4th yr.) Feasibility: Train SPs and raters (qualitative data)

Ethics-Environment

7. Sheehan Survey of Medical Students' Perceptions of Abuse[55,137]	Assesses perceptions of abusive behavior; self-administered questionnaire; 4 pt scale ("never" to "frequently"), qualitative	44	None reported	Face	Purpose: Research Setting: 10 medical schools Participants: Medical students (4th-yr.)
8. Bissonette Ethical Issues in Clinical Education Questionnaire[56]	Assesses reports of ethical issues encountered in clinical education; self-administered questionnaire; qualitative	7 codes	None reported	None reported	Purpose: Education Setting: Medical school Participants: Medical students (2nd & 4th-yr.)

Personal Characteristics-Attitudes/Beliefs

9. Emotional Intelligence Scale[63]	Assesses emotional intelligence; post-interview rating by interviewer; semantic differential scale	34	Inter-item: (Cronbach's alpha) 0.66-.95	Face Content: Exploratory survey Construct: Factor analysis	Purpose: Education Setting: Medical school Participants: Medical school applicants rated by medical school faculty
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10. Schwartz Values Questionnaire [64]	Assesses personal values; self-administered questionnaire; 9 pt scale ("opposed to my values" to "of supreme importance")	56	Inter-item: (Cronbach's alpha) 0.59-0.8	Previously validated, not re-validated in this study	Purpose: Research Nationwide Practicing physicians nominated for Family Doctor of the Year Award (family medicine)	Setting: Participants:
Comprehensive Professionalism-Knowledge						
11. Barry Challenges to Professionalism Questionnaire[76]	Assesses professionalism knowledge; self-administered questionnaire; MCQ, 5-pt scale ("no" to "frequent experience")	6	None reported	Face Construct: Discriminated between levels of experience	Purpose: Research Setting: Medical center Participants: Medical students, residents, faculty physicians (multiple specialties)	
12. Ginsburg Professional Lapse Assessment[77]	Assesses perceptions of professional challenges encountered in clinical settings; data obtained via focus groups; qualitative	6 categories emerged	None reported	None reported	Purpose: Research Setting: 3 medical schools Participants: Medical students (senior) Feasibility: Train interviewer, coders	
Comprehensive Professionalism-Behaviors						
13. Amsterdam Attitudes and Communication Scale[79,140]	Assesses professionalism attitudes and behaviors and communication skills; data collected by direct observation and completion of rating form; 5 pt scale ("poor" to "excellent")	10	Generalizability coefficient: 0.809 for 12 raters and 6 items, Precision: 0.7 (gen coeff.=0.68) 6 raters (using 6 items)	Content: Expert review	Purpose: Education Setting: Medical school (Holland) Participants: Medical students (clerkship) Feasibility: Raters need 3 hours of training, live performance (real time and video) is assessed on 3 occasions, 6 raters used (including nurses and a psychologist)	
14. Clinical Anesthesia System of Evaluation [89,141,142]	Assesses incidents of unprofessional behavior; open-ended card completed by supervising physicians; qualitative	6 codes	None reported	None reported	Purpose: Education Setting: Medical center Participants: Residents (anesthesiology, all years) rated by supervising physicians Feasibility: Cards completed daily	

15. Leisen Scale for Assessing Patients' Trust in Their Physician[78]	Assesses patients' opinions about physician behaviors and office characteristics; questionnaire completed by patients; 7 pt scale ("strongly disagree" to "strongly agree")	51	Inter-item: (Cronbach's alpha) 0.84-0.97; Item-to-total: 0.5-0.93	Content: Expert review Construct: Factor analysis Concurrent	Purpose: Research Setting: Service organization Participants: Employees who had visited a physician
16. Phelan Professional Attributes Evaluation Form[93]	Assesses professional behavior; questionnaire completed by medical school faculty and staff; 5 pt scale ("acceptable" to "severe problem") and room for comments	31	None reported	Construct: Inferred from case disposition	Purpose: Education Setting: Medical school Participants: Medical students (all years) rated by medical school faculty and staff
17. UCSF Physicianship Evaluation Form[95,146]	Assesses professional areas in which students need improvement; questionnaire completed by course directors; MCQ, qualitative	21	None reported	Construct: Inferred from case disposition	Purpose: Education Setting: Medical school Participants: Medical students (all years) rated by courses directors
18. Humanism Scale[67,81, 97]	Assesses opinions about physicians' humanism; questionnaire completed by patients and SPs; semantic differential scale and numbered scale available ("strongly disagree" to "strongly agree")	24	Inter-item: (Cronbach's alpha) 0.95	Face Content: Expert review Concurrent Construct: inferred from positive relationship with patient satisfaction	Purpose: Education and research Setting: Medical school [67,97] and 2 outpatient clinics [81] Participants: Practicing physicians (family medicine), medical students (3rd-yr.) rated by patients or SPs

Comprehensive Professionalism-Environment

19. Scale to Measure Professional Attitudes and Behaviors in Medical Education [99,147]	Assesses professional behavior in a given environment; self-administered questionnaire; 10-pt scale ("never" to "always")	12	Inter-item: (Cronbach's alpha) 0.71-0.75; Item to scale: 0.24-0.52	Face Construct: Factor analysis Concurrent	Purpose: Research Setting: 5 medical schools and centers Participants: Medical students, residents
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20. Stern Value Code[101,148,149]	Assesses natural occurrence of behaviors from which values may be inferred; naturalistic observation and audiotapes by trained observers; qualitative	37 codes	Inter-rater: 0.95+	Content: Observations conducted at various times over 6 months Construct: Inferred from extent of agreement on interpretation of excerpts (0.11-0.91, Kappa)	Purpose: Education Setting: Medical center Participants: Residents and attendings who taught medical students internal medicine) Feasibility: Resources required to conduct observations and code data
Diversity-Attitudes/Beliefs					
21. Cross-Cultural Adaptability Inventory[103]	Assesses potential for cross-cultural effectiveness; self-administered questionnaire; 6 pt scale ("definitely not true about me now" to "definitely true about me now")	50	Previously established Inter-item=0.9 (overall)	Construct: Previously established	Purpose: Education Setting: Ontario International Medical Graduate Program Participants: Foreign medical graduates
22. Sociocultural Attitudes in Medicine Inventory[109]	Assesses student attitudes toward sociocultural issues in medicine; self-administered questionnaire; 5 pt scale ("strongly disagree" to "strongly agree")	26	Inter-item: (Cronbach's alpha) 0.83-0.87	Construct: Factor analysis	Purpose: Education Setting: Medical school Participants: Medical students (2nd-yr.)
Diversity-Knowledge					
23. Cultural Competence in Medicine Questionnaire[104]	Assesses opinions and self-reported knowledge about cultural issues in medicine and community involvement; self-administered questionnaire; 4 pt scales ("not at all well/never" to "very well/often"), 5- pt scale ("strongly disagree" to "strongly agree")	43	Inter-item: (Cronbach's alpha) 0.85 for 2 subscales, reliability of other scales established in another study	Face Content: Expert review Construct: Discriminated between course participants and non-participants	Purpose: Education Setting: Medical school Participants: Medical students (1st & 2nd-yr.)

24. University of Michigan Cultural Sensitivity Questionnaire[110]	Assesses knowledge of cultural issues; self-administered questionnaire; MCQ, T/F, qualitative	10	None reported	Construct: Post-course improvement in performance	Purpose: Education Setting: Medical center Participants: Residents (psychiatry, all yrs.)
Diversity-Behaviors					
25. Robins' Health Beliefs Communication OSCE[111]	Assesses cultural competence; data collected by SPs; checklist	10	Inter-item: (Cronbach's alpha) 0.61-0.83	Face Construct: factor analysis	Purpose: Education Setting: Medical school Participants: Medical students (4th-yr.) Feasibility: OSCEs are costly
Diversity-Environment					
26. Elam Diversity in Medical School Questionnaire[106]	Assesses attitudes toward and perceptions of diversity in classrooms; self-administered questionnaire; 5 pt scales ("strongly disagree" to "strongly agree" and "never" to "always")	16	Inter-item: (Cronbach's alpha) 0.73	None reported	Purpose: Research Setting: 4 medical schools Participants: Medical students (1st-yr.)